DESIGN

FOR

INDUSTRIAL ARTS

LETTERING

JOHN KYLE

Hon. A·R·C·A·London

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DESIGN
FOR
INDUSTRIAL ARTS

JOHN KYLE
Hon. A.R.C.A., London

BOOK III---LETTERING

Authorized by the Department of Education
for British Columbia

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"Life without Industry is Guilt,
And Industry without Art is Brutality."
—*Ruskin.*

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DESIGN FOR INDUSTRIAL ARTS

Book I.—Woodwork.
Book II.—Metal-work.
Book III.—Lettering, Block Printing, etc.

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DESIGN
FOR
STUDENTS OF INDUSTRIAL ARTS
WITH
APPLICATION TO LETTERING.

GENERAL PREFACE.

IN the light of present-day educational philosophy the subject of industrial arts has assumed a broader aspect than ever before. Creative thought and motor activities have been brought into close relationship; aesthetic and constructive problems are correlated with each other and the educational worth of industrial arts has been increased, enriched and dignified.

"I believe profoundly," writes J. Howard Whitehouse, Headmaster of Bembridge School, England, "that manual activities—using these words in their widest sense to embrace art and craftsmanship—should not be regarded as trivial 'extras' or as pastimes for young children, but should be given a place of honour in every school, and should be recognized as definite instruments of noble education.

"Such an ideal has always been in front of us here and so far as we have been enabled in any degree to realize it, this has been without loss to the ordinary academic work common to all public schools. We believe, indeed, that the latter has greatly benefited owing to the larger vision, the keener intellectual spirit introduced into the school by a wider curriculum giving to arts and crafts their proper place."

Attention to thoughtful creative skill in design, with due regard to the aesthetic element in constructive work, opens up a great vista to the student. To all his creative efforts he may bring a thought-content embracing history, geography and scientific study.

The subject of industrial arts includes the history of the human race, and the adaptability of man to his environment; it shows the development of the tools and processes of present-day industries.

In every age and in every country the lives of the people have been guided by principles, and the same may be found underlying their constructive efforts. A knowledge of the fundamental principles of design forms the basis of all phases of industrial arts and to make this clear to the student this grammar of design has been written.

Professor R. A. Kissack of New York University in an article in the *Industrial Arts Magazine*, March 1927, refers to the fact that no furniture of American manufacture was found at the Exposition of Industrial and Decorative Arts at Paris, because only modern exhibits of original design were permitted. While American manufacturers were busy making copies of furniture from Jacobean, Elizabethan, Chippendale, Hepplewhite, Adams and other historic styles, they were neglecting to design furniture from fundamental principles, furniture appropriate to the homes and to the lives of Americans.

This fault is not confined to the people of any one country, but each, building on a knowledge of the fundamental principles of design should foster an expression of their own individuality and national characteristics. The rules of design as contained in this book will give the young craftsman in any country a basis on which to build any creative and industrial activity.

The rules are few in number, clearly stated, frequently repeated, and their uniform consistency emphasized in many materials.

"Rules," says Robert Henri, "are only for mechanics," but the rules of industrial design here drawn up are for artisans and craftsmen who wish to develop into robust art lovers. The rules are flexible enough to prevent mechanical and primitive production.

"The arranging or designing part in all kinds of work must be a delightful exercise of skill to all who know the rules," writes Mr. W. R. Lethaby, one of the foremost art craftsmen in the world to-day. The best players are always those who know and obey rules. Through knowledge, man is enabled to triumph over brute labour and produce beauty. Beauty is thus the expression of man's pleasure in labour.

The problems, both correct and incorrect, have nearly all been culled from work done in Junior High Schools and therefore the practicability of the lessons is assured.

INTRODUCTION TO LETTERING.

THE art of lettering provides excellent material for the study of the principles of design. These principles are well illustrated in the proportions and construction of the letter, the combinations of straight lines with curved, and the characteristic letter forms which come from the use of various writing materials; the pencil, writing pen, lettering pens of different kinds including quill and reed, or the artistic and flexible brush. All these various materials for lettering leave their distinctive features on the letters themselves, and these characteristics should be preserved and cherished. There should never be any attempt to make a pen letter look like one made with a brush, or a brush letter to look like one made with a reed. The distinctive features of each should always be honestly preserved.

Of all the materials which school pupils possess, the pencil and steel writing pen are the most universally used, and they are the ones with which the pupils are most familiar. From an artistic point of view, however, the hard point falls far short of the soft one, be it a quill or a brush; the product of the former is hard, and the latter is soft and possible of feeling.

Nevertheless it is necessary and advisable to master with a steel pen the capitals and lower-case letters of some simple alphabet, and habitually to make these letters with decisive strokes in correct sequence and direction.

This practice may be obtained in two ways; first, by a determined repetition of the letters until the forms are memorized, second, by lettering helpful and inspiring quotations, while at the same time gaining practice in making correct letter forms.

The letters of the alphabet on pages 15, 19, 22 to 27, are for our purpose proportioned in the ratio of two to three, two being the breadth and three the height.

While it is common to see the horizontal line of the letters come exactly half way up the height, yet the most artistic division is the one referred to which comes about one-third from the top or bottom of the letter.

A grasp of this fundamental principle of proportion, and stern practice in forming the letters with decision will give a pupil the desirable power to go far in the attractive art of lettering.

Page 15 shows an excellent alphabet made with an ordinary writing pen. The horizontal divisions obey Rule VII inasmuch as they do not come half way up the height of the letter. Notwithstanding the fact that there are many alphabets copied from the Roman lettering on the Trajan Column at Rome, where the horizontal lines come half way up the height, the fact remains that the best Grecian traditions of determining a more subtle position than the half is in favour of placing horizontal lines higher or lower than the centre. For this reason Rule VII is carried into lettering and page spacing, viz.—"in dividing a vertical primary mass into two or three horizontal subdivisions, one of the spaces should dominate the other in a correct ratio."

Page 16 also shows pen lettering and ornamentation written with an ordinary writing pen in a firm, direct way. The capitals are similar to those designed for *repousse* metal and it will be found that the spaces lend themselves to colouring. The fundamental principles of border designing can be remarkably well taught with the pen; the indispensable principles of repetition, variety and radiation can all be easily recognized in the pen borders. It is also interesting to note the similarity which those pen borders bear to the designs recommended for wood incising, gesso-work, metal-work, etc. in Books I and II.

While guide lines and spacing may be made with ruler and compasses and any mechanical means be used for planning out the work on the sheet or page, the pen work itself should not be laboured and made to look like machine type.

Trust the eye a great deal and preserve the fresh, spontaneous effect which comes from direct workmanship.

Page 17 illustrates pen treatments from old missals. The letters show frank, direct, confident work by some scriptor who wrote hundreds of years ago. Those students who wish to know more about the work from these ancient scriptoriums should purchase an inexpensive series of books in four parts:—The Art of Illuminating, by W. J. Loftie, B.A., F.S.A., published by Blackie & Sons.

On the following pages, 15 to 20, will be found some excellent pen work with all the charm of freedom preserved. From these it will be seen that there is no more important tool in the school for teaching design than the pen, and that pen work calls forth every quality of skill and taste which is demanded of creative art.

The page of heraldry, page 21, is introduced because of its decorative qualities. If the rules of heraldry are obeyed in design there will be no danger of falling into the trap of naturalism. In the coat-of-arms, for instance, the lion is a decorative creation and not a copy from nature. The more natural that lion could be made, the more unsuited would it be for heraldry and for reproducing in material. This principle is consistent in all decorative art.

Pages 22 and 23 show the sequence of pen strokes which should be observed in making letters. Care at the commencement to obey these directions will be amply repaid later on and will make unnecessary the great network of guiding lines which is often advocated. Moreover, this mastery of method will make agreeable spacing easier and develop the necessary power to indulge in creative design.

The character of pen printing will vary with the type of pen nib used, and on page 23 will be seen an example of lettering executed with Manuscript pen No. 6, made by Reeves, Toronto, while on page 25 examples from ball-pointed and square-pointed pens may be seen. The ball-pointed pen gives a soft, brush-like character to the work; the line has the character of a woodcut which is printed from lines cut with a small gouge or veiner. Spontaneous workmanship with a ball or square-pointed pen has a charm of its own and should be appreciated accordingly. Nearly all the designs for V Tool decoration in wood will be found suitable for the ball-pointed pen and will be easy to translate. When the construction of leaves, and other natural forms is thoroughly understood as described in the lesson for V Tool decoration, (woodwork) it will not be difficult to make pen-leaf forms and obtain results in the rich character of the famous woodcut pages which were made by William Morris of the famous Kelmscott Press in England. (See page 30.)

A reed pen similar to the quill pen may be made from thin pieces of bamboo cane. Take a piece as thick and long as a pen-holder. Cut the end in a clean, slanting direction; trim it to a chisel-edge about an eighth of an inch wide; then slit the nib as seen in diagram, page 26. Next insert an ink-holder made from a tiny strip of thin brass or tin. This holds a little drop of ink against the point. The pen should be inked with a brush and then only on the inside.

In using the reed pen, do not press on the paper as in lettering with a steel pen. It must always be drawn towards the body or slid sideways, never pushed for an up-stroke. Notwithstanding the fact that up-strokes cannot be made with the reed pen, yet excellent forms may be produced.

Excellent pens for script writing and poster work are made by William Mitchell, Birmingham, England. The prices will be found to be more suitable for school boys and girls; Script pens, five cents each or fifty cents per dozen; Poster pens, sixty cents per dozen. A good pen for large work is called the 'Witch'—price ten cents.

RULE

I. An oblong should have a proportion of subtle dimensions which is difficult for the eye to detect.

II. In dividing a horizontal primary mass into two horizontal subdivisions, one of the spaces should dominate the other in a correct ratio.

III. In dividing a horizontal primary mass into three horizontal subdivisions, one of the spaces should dominate the other two in an artistic ratio.

IV. In dividing a horizontal primary mass into two vertical subdivisions, the spaces should be equal in area and similar in form.

V. In dividing a horizontal primary mass into three vertical subdivisions, the dominant space should be in the centre and the spaces at each side should be equal in area and similar in form.

VI. In dividing a horizontal primary mass into more than three vertical subdivisions the spaces should be equal in area and similar in form, or arranged in groups.

VII. In dividing a vertical primary mass into two or three horizontal subdivisions one of the spaces should dominate the other in a correct ratio.

VIII. In dividing a vertical primary mass into more than three horizontal subdivisions the spacing should be varied in an agreeable ratio and the widest space should be the lowest.

RULE

IX. In dividing a vertical primary mass into two vertical subdivisions the spaces should be equal in area and similar in form.

X. In dividing a vertical primary mass into three vertical subdivisions the dominant space should be in the centre and those at each side should be equal in area and similar in form.

XI. In dividing a vertical primary mass into more than three vertical subdivisions the spaces should be equal in area and similar in form or arranged in groups.

XII. When a secondary mass is added to a primary it must correspond in form and character in order to ensure harmony.

XIII. For outlines and contours the elliptical or oval curves of beauty should be used which are more subtle, refined, and artistic than the circular.

XIV. The border should have a correct proportion in relation to the panel: decorations should be made by the repetition of varying forms to prevent monotony.

XV. The panel should have correct proportions, and may be decorated by radiating lines and varying forms which should emphasize and harmonize with the shape of the panel.

XVI. The shape of the profile or section of a moulding should be the key form used to build up the ornamentation of the moulding.

With the exception of Rules XII, XV, and XVI, all the rules in the Grammar of Design will be found of value in Lettering.

LETTERING III

A WRITING-PEN ALPHABET

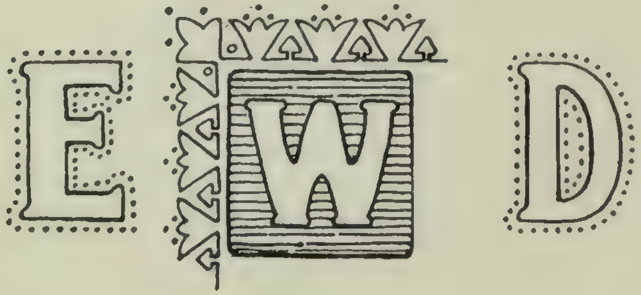
A B C D E F G H I J K L
M N O P Q R S T U V W
X Y Z

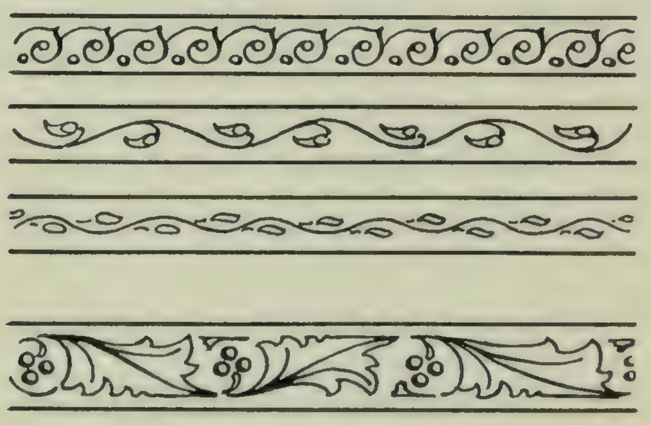
1 2 3 4 5 6 7 8 9 0 & ?

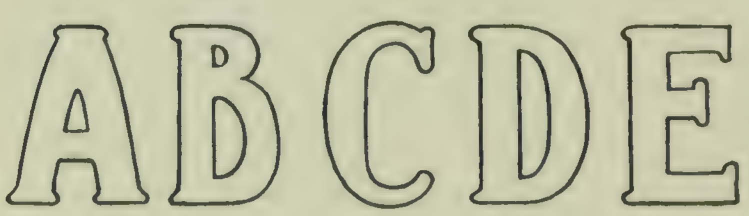
a b c d e f g h i j k l m n o
p q r s t u v w x y z . . .

He who goes the wrong
road must go the journey
twice over.

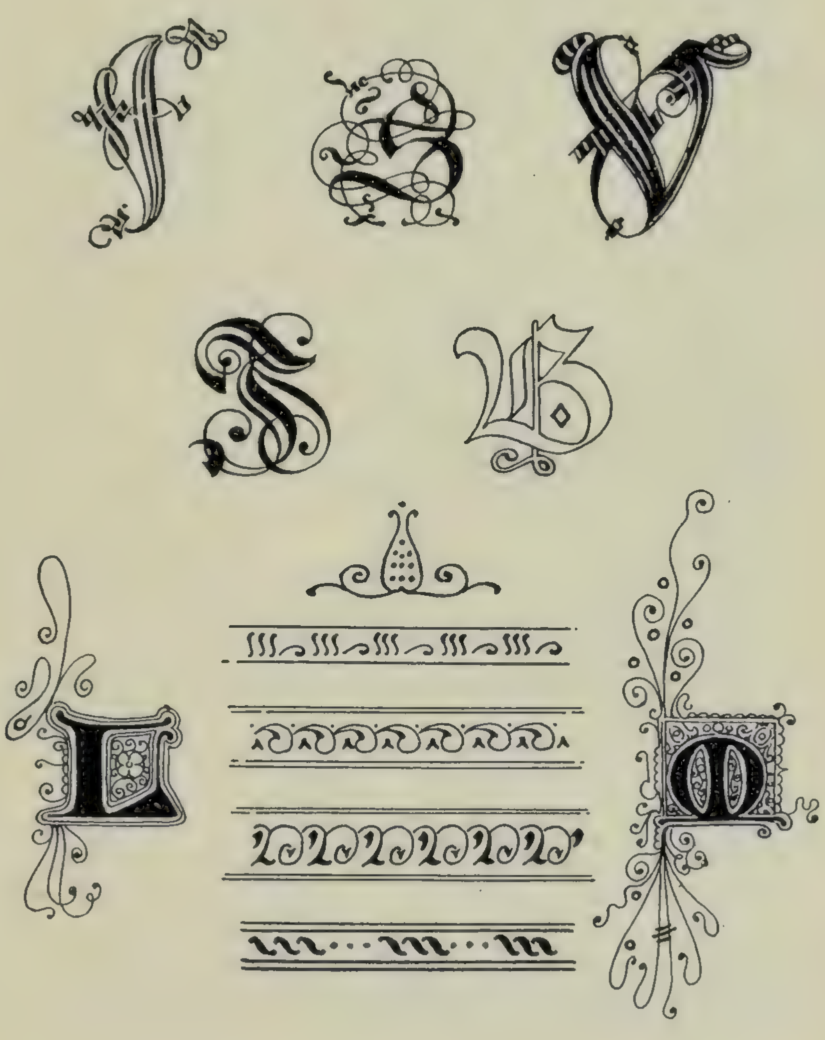
PEN BORDERS AND PEN TECHNIQUE



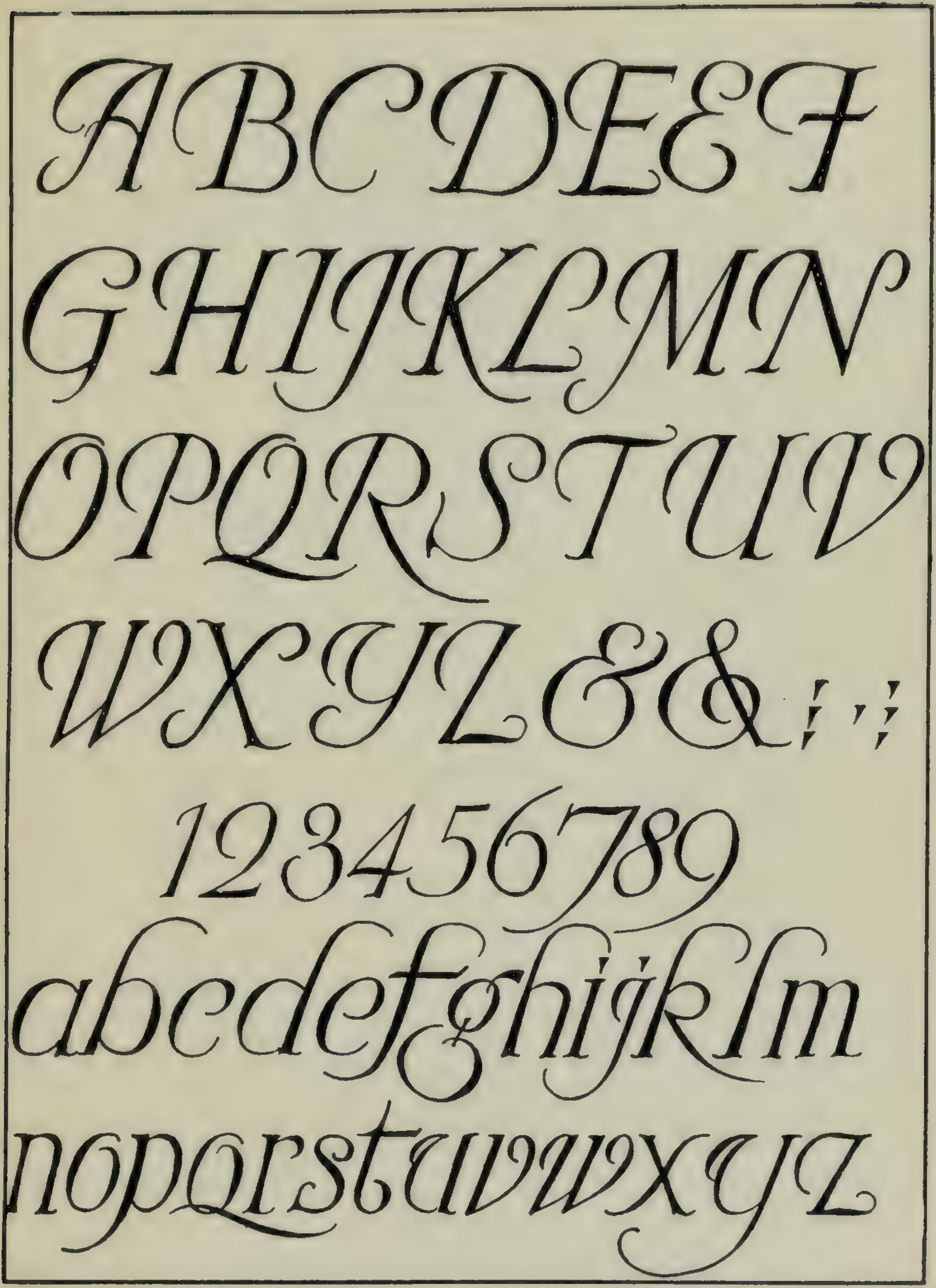




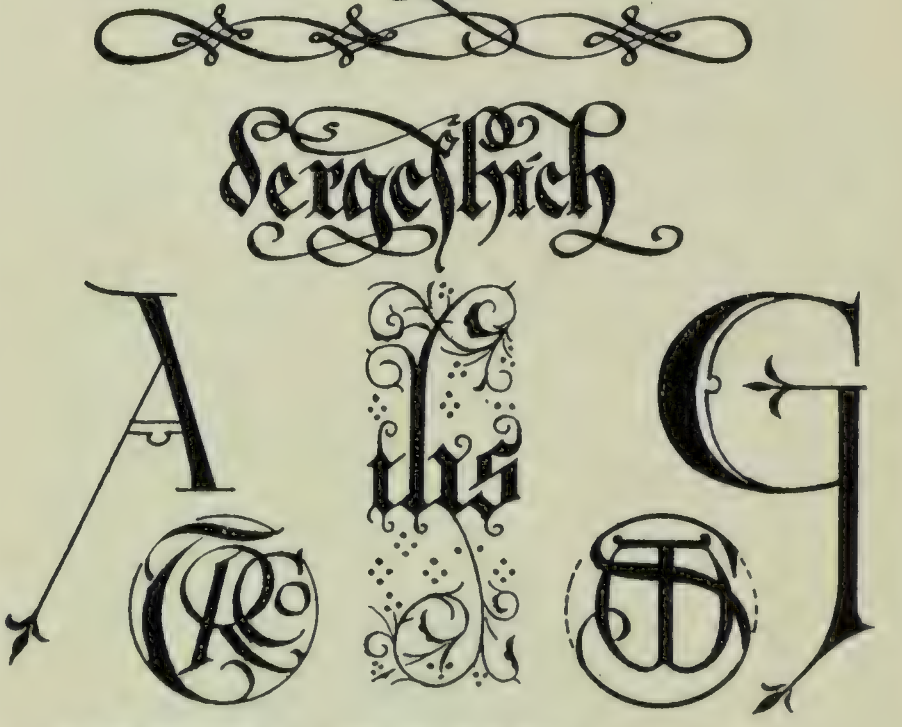
Writing Pen Technique

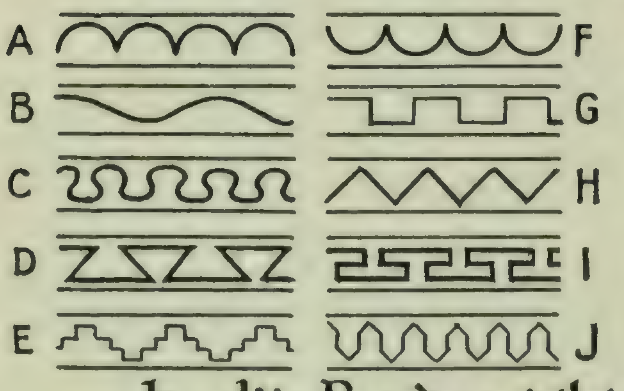


Oh, if love build on sparkling sea,
And, if love build on golden strand,
And, if love build on rosy cloud,
To love these are the solid land!


ABCDEF
GHIJKLMN
OPQRSTUV
WXYZ&&;,;
123456789
abcdefghijklm
nopqrstuvwxyz

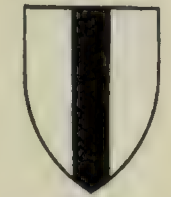
Pen Letters





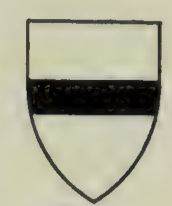
A Engrailed
B Wavy
C Nebule
D Dovetail
E Embattled grady
F Invected
G Embattled
H Indented
I Potent
J Urdec

Heraldic Bands and their Names

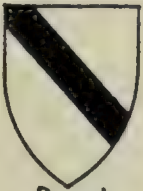


Pale

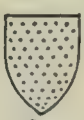
Coat of Arms with Crest, etc.



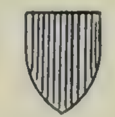
Fesse



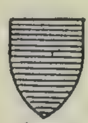
Bend



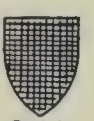
Or



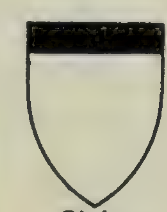
Gules



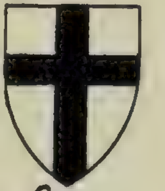
Azure



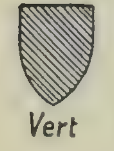
Sable



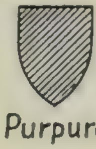
Chief



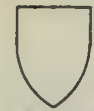
Cross



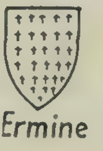
Vert



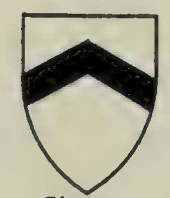
Purpure



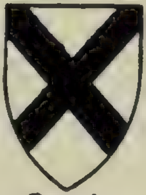
Argent



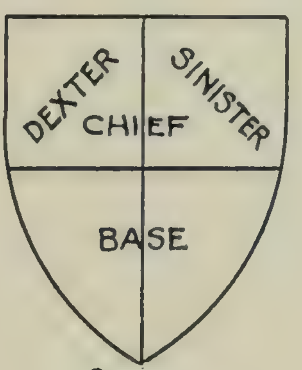
Ermine



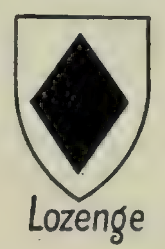
Chevron



Saltire



Quarters

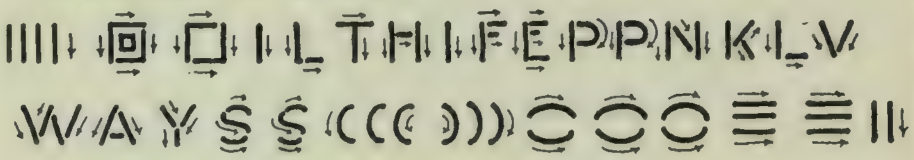


Lozenge

LETTERING

This lettering should be done without sketching
It should be written
with slow firm lines.

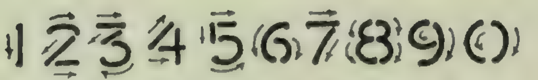
Practice Strokes



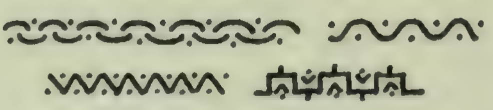
CAPITALS

ABCDEFGHIJKLMNOPQRSTU
VWXYZ

◆

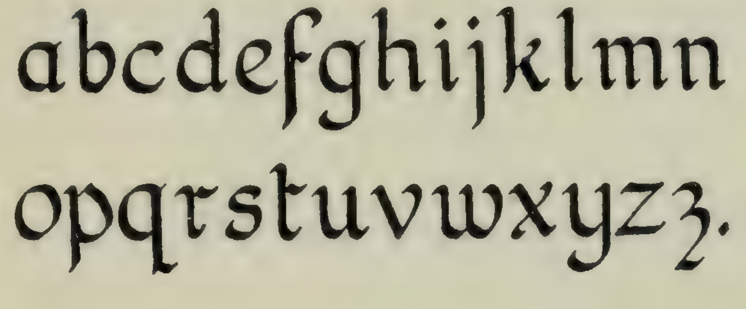


1 2 3 4 5 6 7 8 9 0

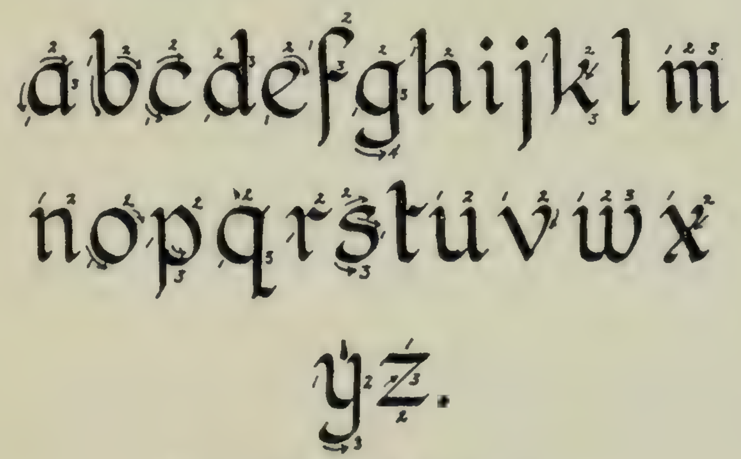


LETTERING

LOWER CASE LETTERS



Sequence of Strokes.



Executed with Reeves'
Manuscript Pen No. 6.

LETTERING

It is often necessary in lettering to contract and expand letters that the text as a whole may be well spaced

ABCDEFGHIJKLMNOPQRSTUV
WXYZ

* * *

abcdefghijklmnopqrstuvwxyz aaa

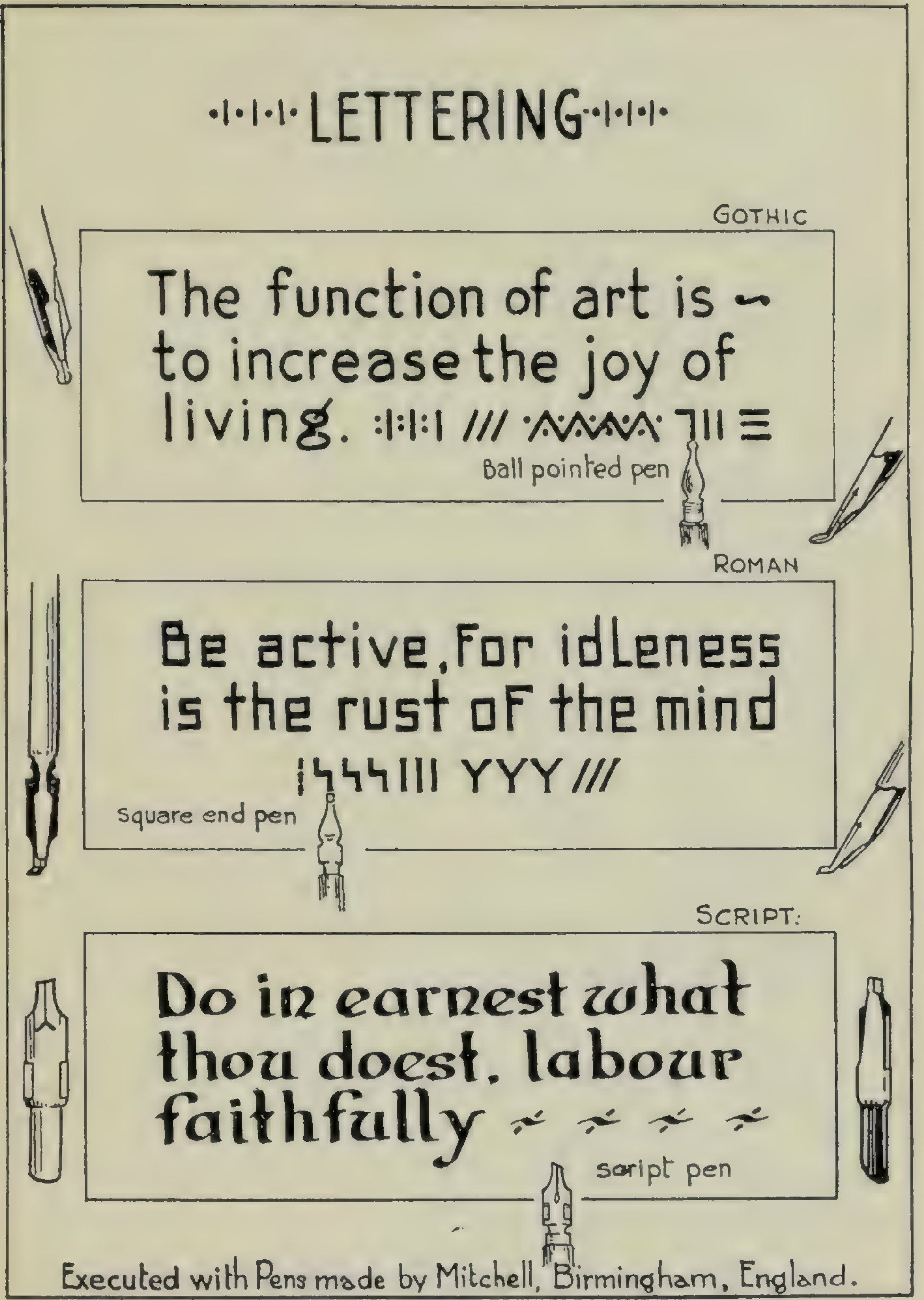
ABCDEFGHIJKLMN
OPQRSTUVWXYZ

* * *

abcdefghijklmnopq
rstuvwxyz

* * *

LETTERING



GOTHIC

The function of art is — to increase the joy of living. ///

ROMAN

Be active, for idleness is the rust of the mind

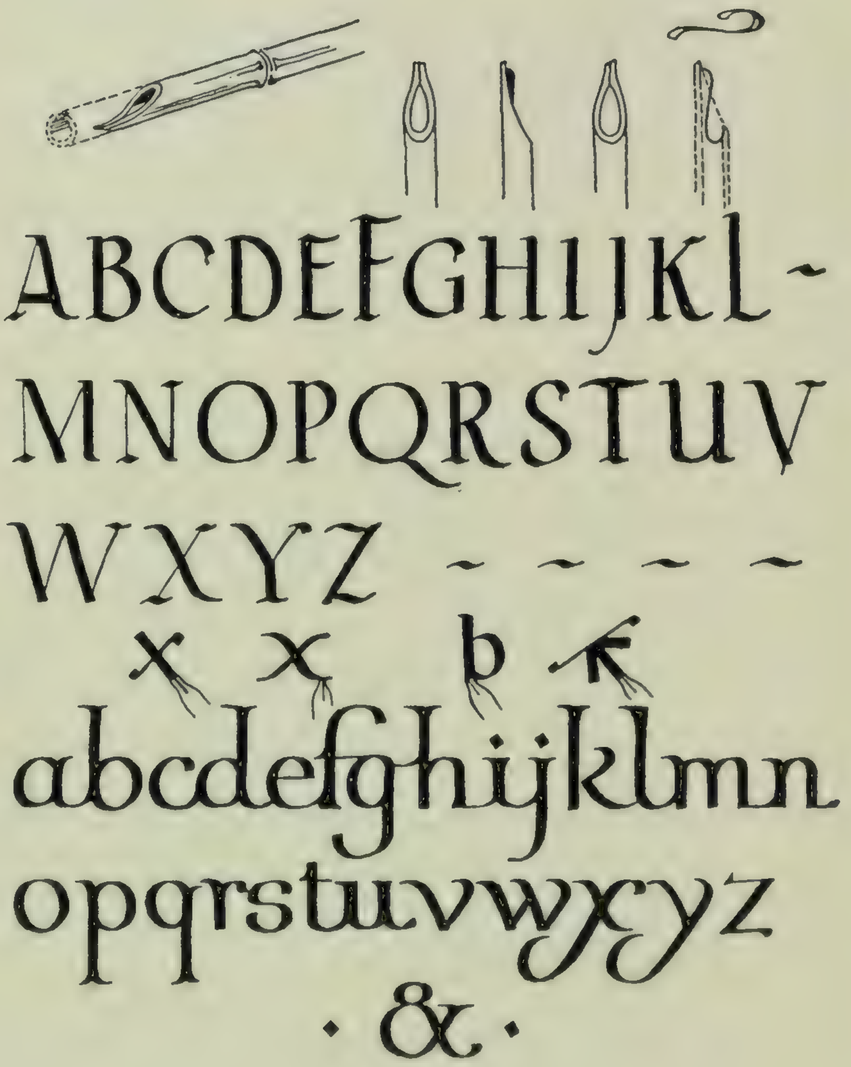
YYY ///

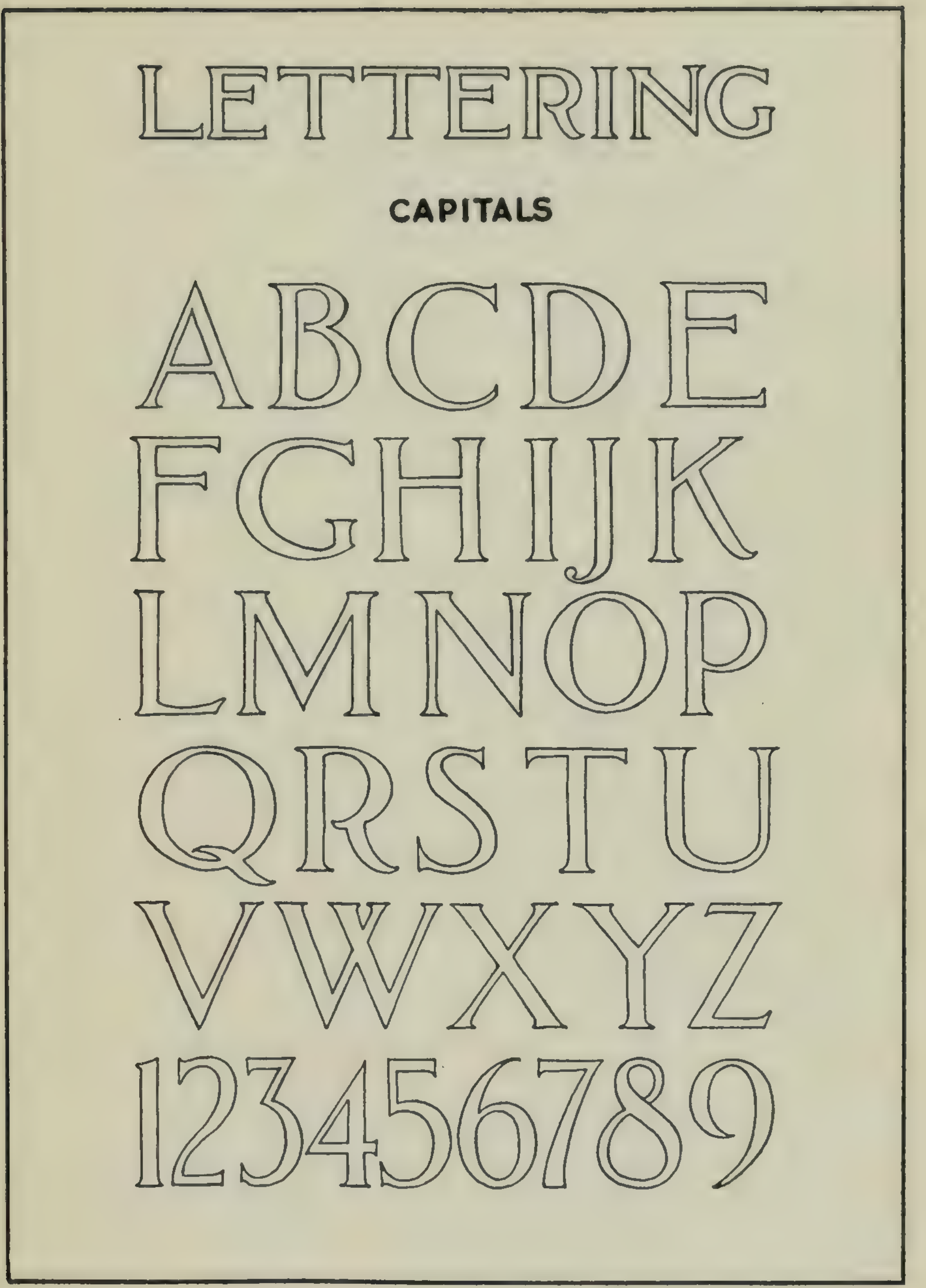
SCRIPT:

Do in earnest what thou doest. labour faithfully

Executed with Pens made by Mitchell, Birmingham, England.

BAMBOO PEN LETTERING




LETTERING
CAPITALS
ABCDE
FGHIJK
LMNOP
QRSTU
VWXYZ
123456789

LETTERING.

IT is not expected that the students should copy all the alphabets illustrated in the previous section; the purpose is to show the varying characteristic of pens and to impress upon the student the importance of preserving each distinguishing feature. Rigorous and patient practice, however, is imperative in mastering the basic construction of lettering and the sequence of lines as seen on pages 22 and 23 and which are common to all alphabets.

The introduction of a picture on the printed page brings a serious problem before the designer, for the picture should be appropriate to the printed matter; it should not break the unity or harmony of the page.

Reference to page 29 will show how well Walter Crane has harmonized the illustration with the lettering. The appearance of the whole page was evidently considered and nothing was allowed to disturb its character.

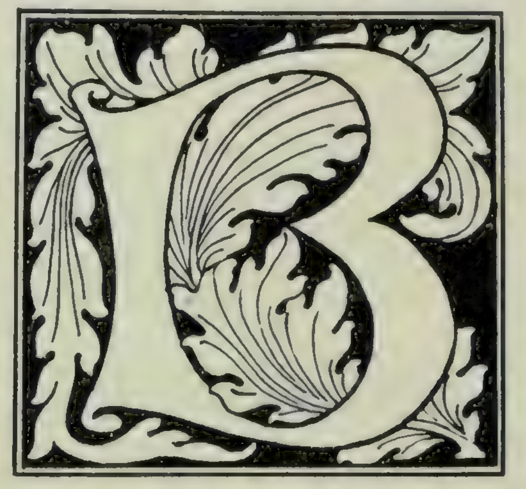
For this reason line work and wood or linoleum cuts are more appropriate to the printed page than half-tone illustrations or those having a photographic character.

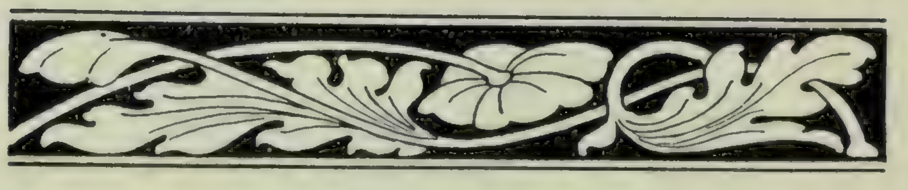
Guard well within yourself that treasure, kindness. Know how to give without hesitation, how to lose without regret, how to acquire without meanness.

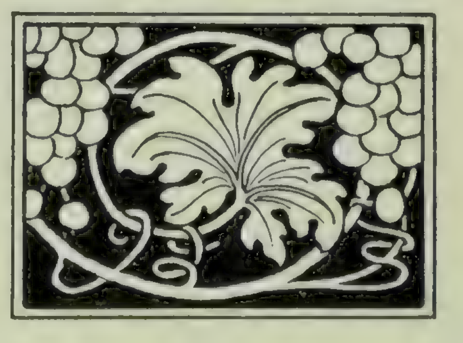
WILLIAM · CAXTON WAS · BORN · IN KENT, ENGLAND HE · WAS · APPRENTICED · TO · A · MERCER; AN · Importer in woolen fabrics. In 1462 he was Governor of the Merchant Adventurers of the English Nation in the Netherlands, at Bruges; a position of great importance in trade, equal to that of Governor of the East India Company

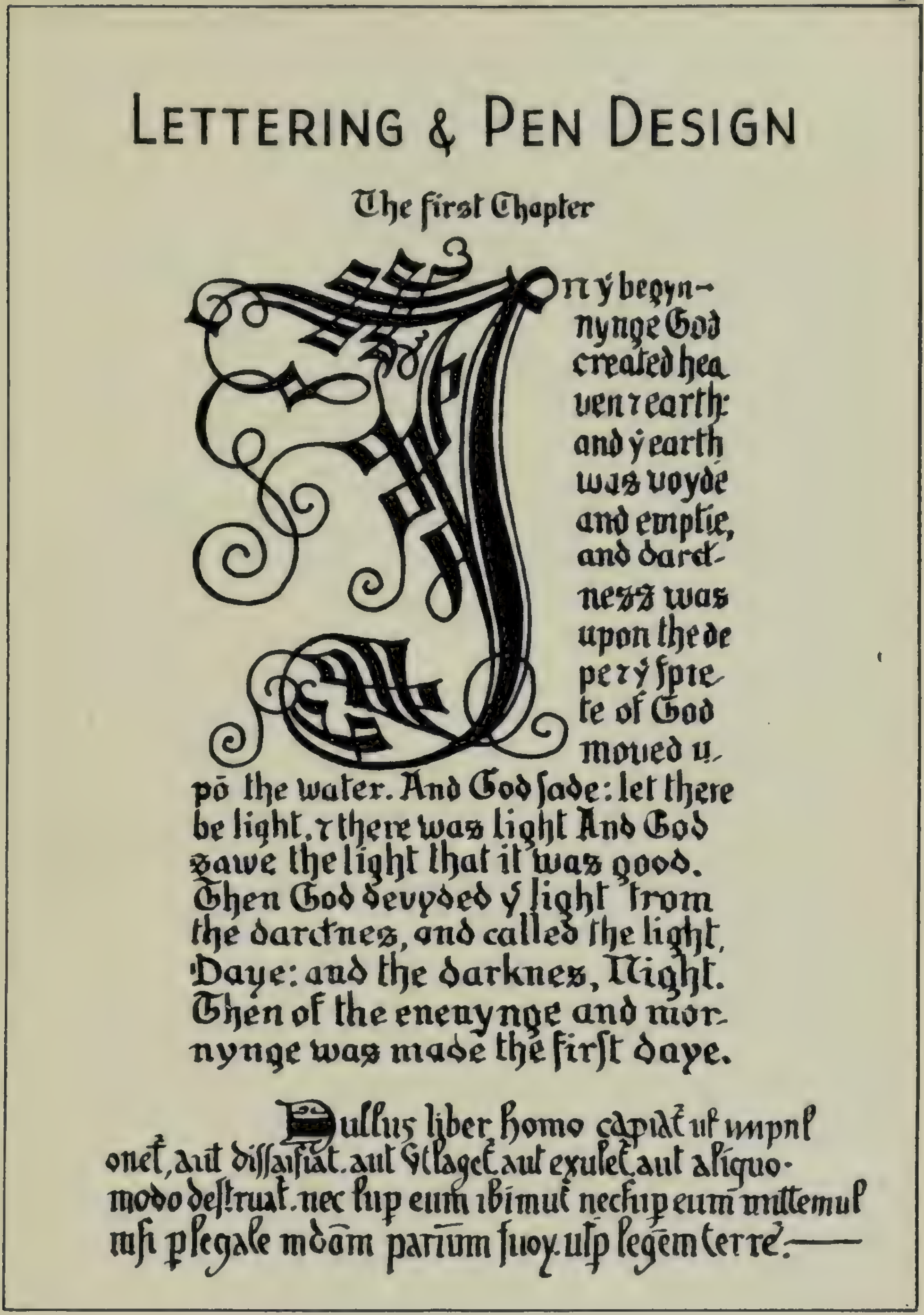
In Caxton's time the Netherlands were ruled by Charles the Bold, Duke of Burgundy, who had married Princess Margaret of England, a sister of Edward the IV. Caxton was a close friend of Edward.

Lettering and Pen Design









LETTERING & PEN DESIGN

The first Chapter

In ẏ begynnynge God created heaven ⁊ earth: and ẏ earth was voyde and emptie, and darckness was upon the depe ⁊ ẏ ſprete of God moved upō the water. And God ſade: let there be light, ⁊ there was light And God sawe the light that it was good. Then God devyded ẏ light from the darcknes, and called the light, Daye: and the darknes, Night. Then of the evenynge and mornynge was made the firſt daye.

Nullus liber homo capiat' ul impris onet', aut diſſaiſiat' aut ut lagat' aut exulet' aut aliquo modo deſtruat' nec ſup eum ibimus nec ſup eum mittemus niſi p legale iudm̄ parium ſuoꝝ ul p legem terre.—

The charm and richness of the woodcut is becoming more and more popular, and it is now better realized how admirable it is in every way, and how worthy of emulation is the work of the scriptors who lived in the ages past.

Illustrations on pages 53, 54, 55 and 56 are characterized by spontaneity, freedom, and complete harmony.

Two excellent and inexpensive books on penwork and lettering are the following:—

Grace E. Melvin—"Basic Lettering for Art Students." (Longmans, Green & Co., Toronto).

Payne—"Lettering." (Batsford, London).

SPACING AND PROPORTIONING.

IN planning a page of lettering, a good lay-out will be found to be of more importance than either perfect lettering or decoration. The student who can arrange his lettering into simple groups and balance these groups according to their weight and importance has learned the secret of effective arrangement.

It is necessary, when making a lay-out for a page of lettering, to first consider the proportions of the page itself, (the primary mass in furniture design) around which the marginal subdivisions should be spaced. Diagrams A and F on page 35 illustrate the procedure which should be adopted in order to obtain satisfactory results.

It should be noted that the rules relating to vertical and horizontal subdivisions in furniture design are also applicable to a page of lettering. Equal measurements as at A should obviously be avoided. The horizontal divisions should be placed as at B, the middle space predominating and the lower space being wider than the top; refer to

Rule VII, which says:—"In dividing a vertical primary mass into two or three horizontal subdivisions one of the spaces should dominate the others in a correct ratio."

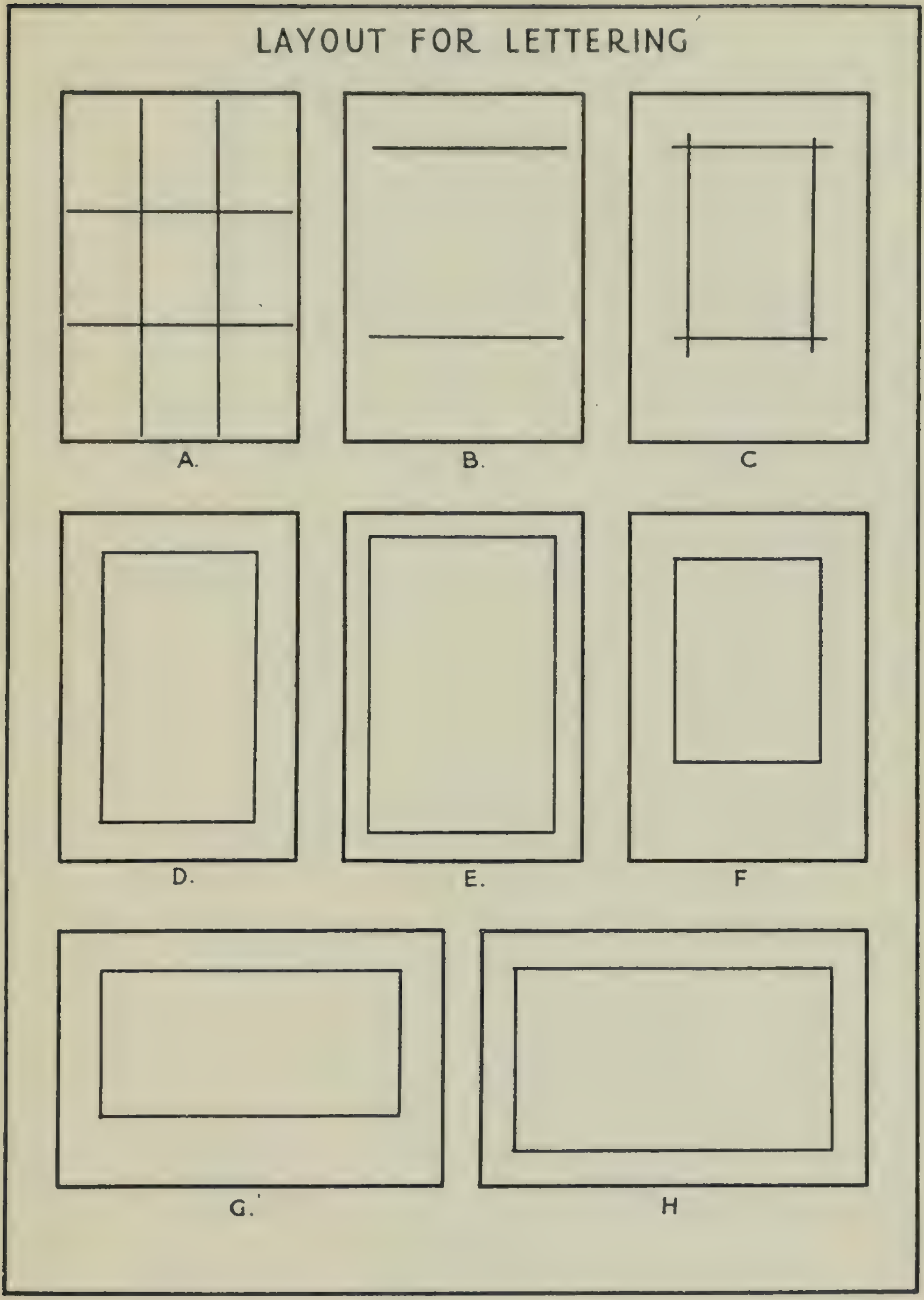
The vertical subdivisions should next be drawn, keeping the centre space the wider and thus obeying Rule X:—"In dividing a vertical primary mass into three vertical subdivisions the dominant space should be in the centre and those at each side should be equal in area and similar in form."

By comparing D with E and F it will be seen that the spacing at F is superior to the two other examples. The illustration D gives one the idea that the opening is below the centre while the border E is too narrow. The same faults may be seen when comparing examples G and H.

Arrangements to fill the printed space may be divided under two heads, i.e.—symmetrical and balanced. It takes greater experience to make a successful balanced arrangement than one of a symmetrical nature. Therefore beginners should be encouraged to keep to the latter style.

A symmetrical treatment ensures order and its attendant dignity, both of which are closely associated with the artistic; comparison of the two styles on page 37 will make this clear.

In some of the examples on page 37 the eye is inclined to be drawn from the centre of the sheet to the edge, which is a bad fault in arrangement of

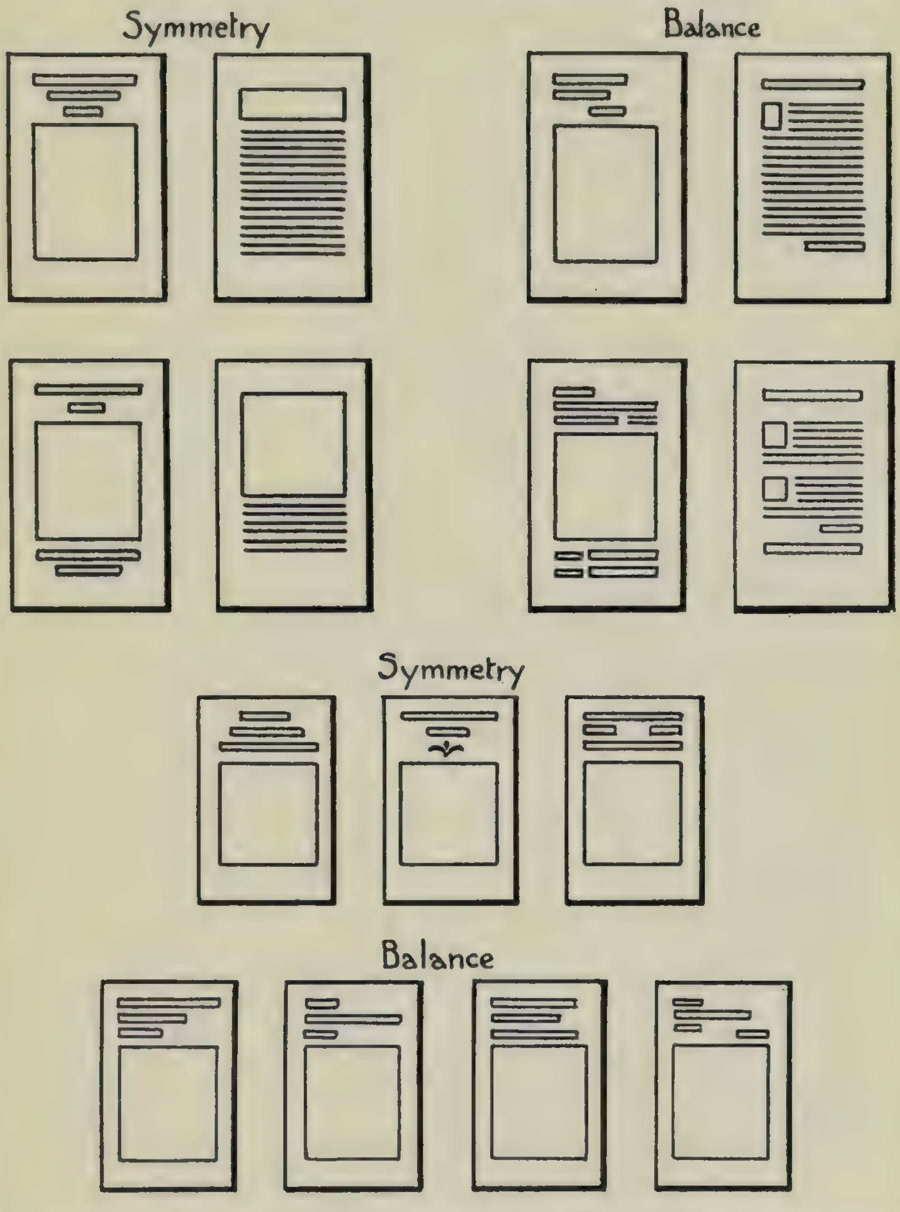


LAYOUT FOR LETTERING

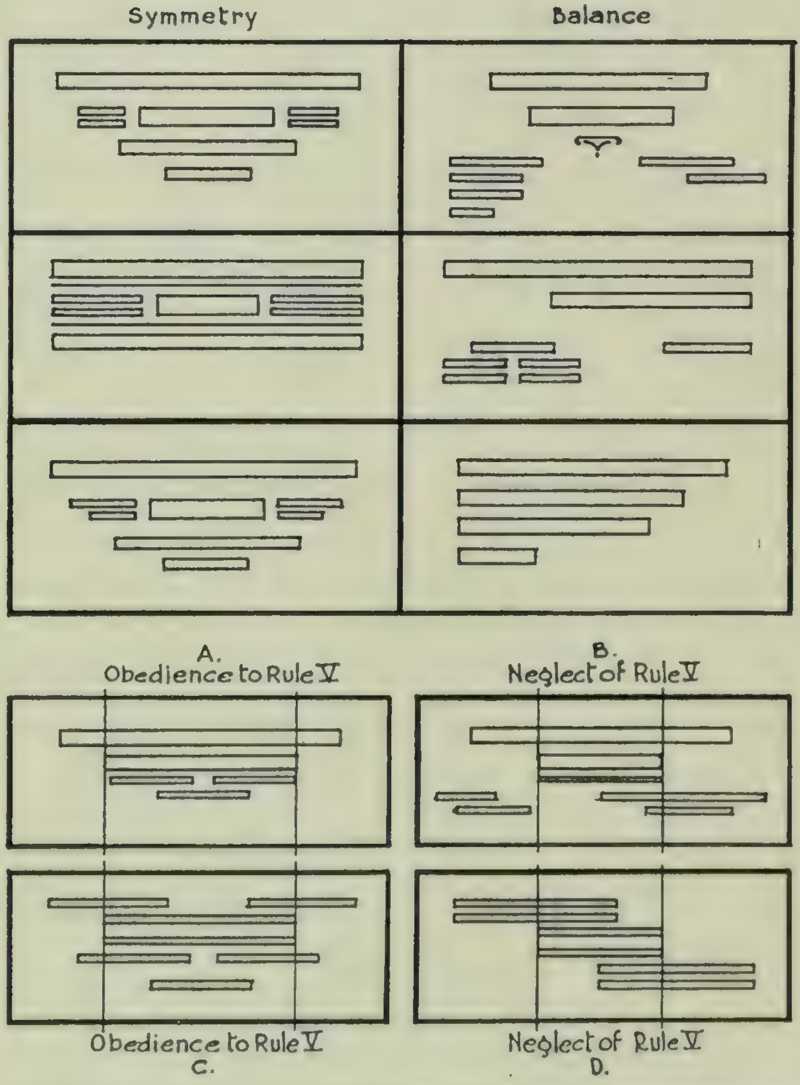
a show-card. An endeavour should always be made to focus the attention on the card. Examples displaying fine feeling for balance and arrangement may be seen on pages 37, 38, and 39.

Well-trained typographers thoroughly understand the rules of spacing, although many restrictions in proportion are often defined by trade conditions. While the width of the margin is something which should always be carefully considered, yet the rules need not be obeyed to the letter by people who are familiar with them.

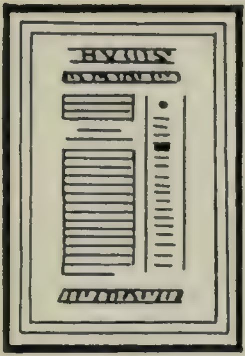
SPACING & PROPORTIONING



SYMMETRY & BALANCE



Balanced Arrangements . .
Numbers 1.2.3.4.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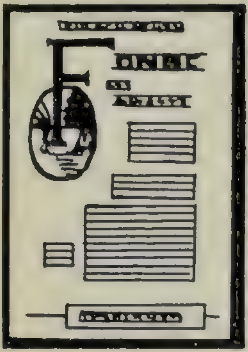
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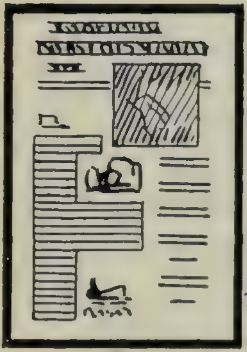
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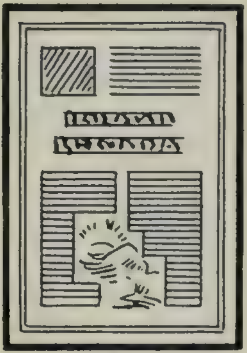
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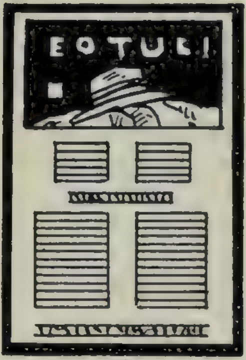
Symmetrical Arrangements . .
Numbers 5.6.7.8.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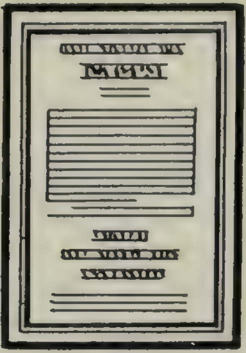
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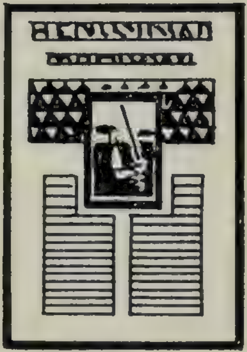
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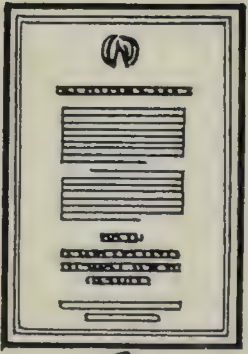

8

SYMMETRY AND BALANCE

DIAGRAMS A, B, and C on page 42 show margins which are too equal at A, too narrow at B, and too wide at C. At A the printed space appears too low on the page because of the equality of space all around. The optical centre of the page is always above the real centre.

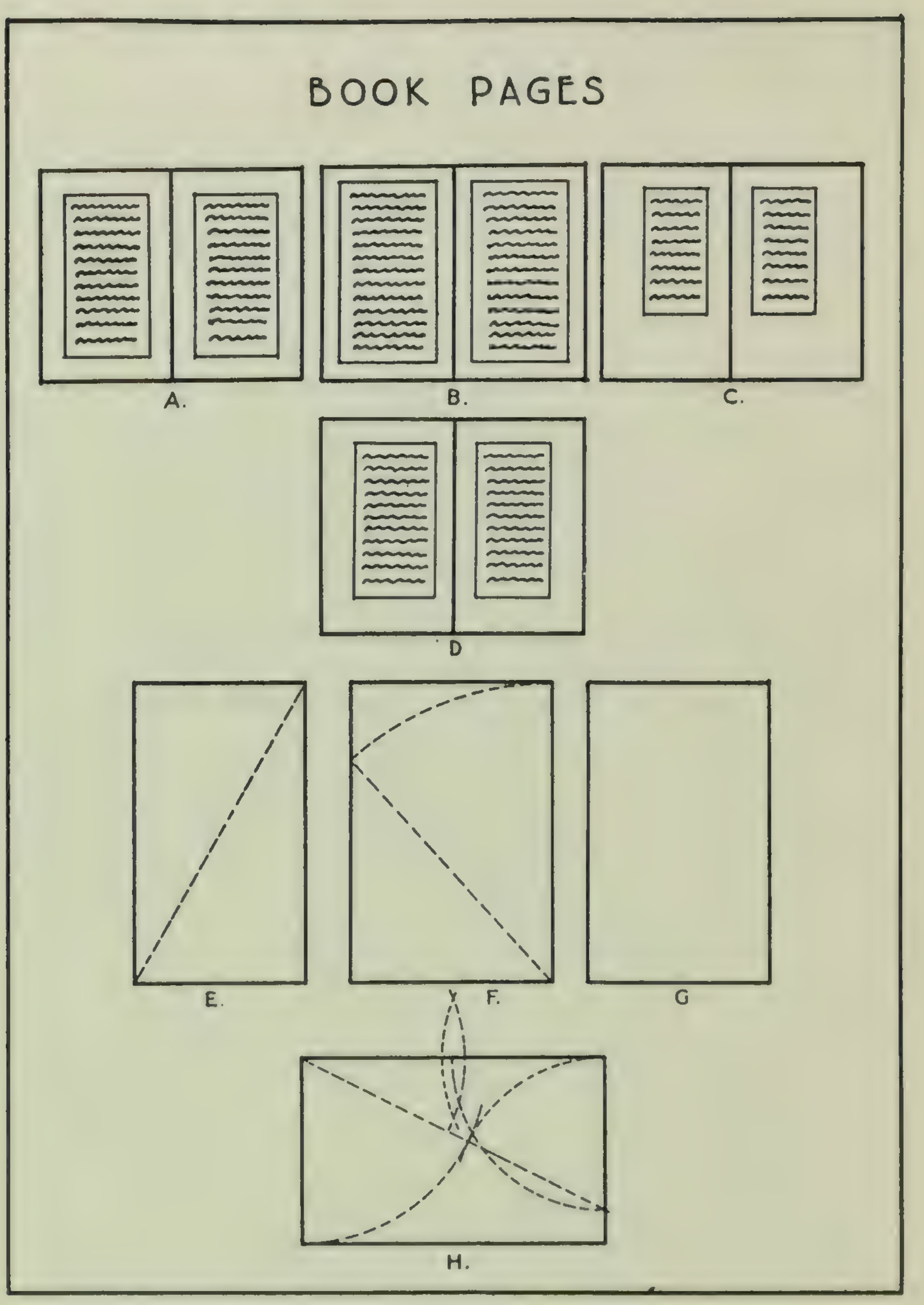
The area of printed matter at B is too great and at C too small, although under certain circumstances a distinctiveness may be obtained by keeping an ample border.

Illustration D, page 42, shows a good fundamental proportion, and the lower space is the broader.

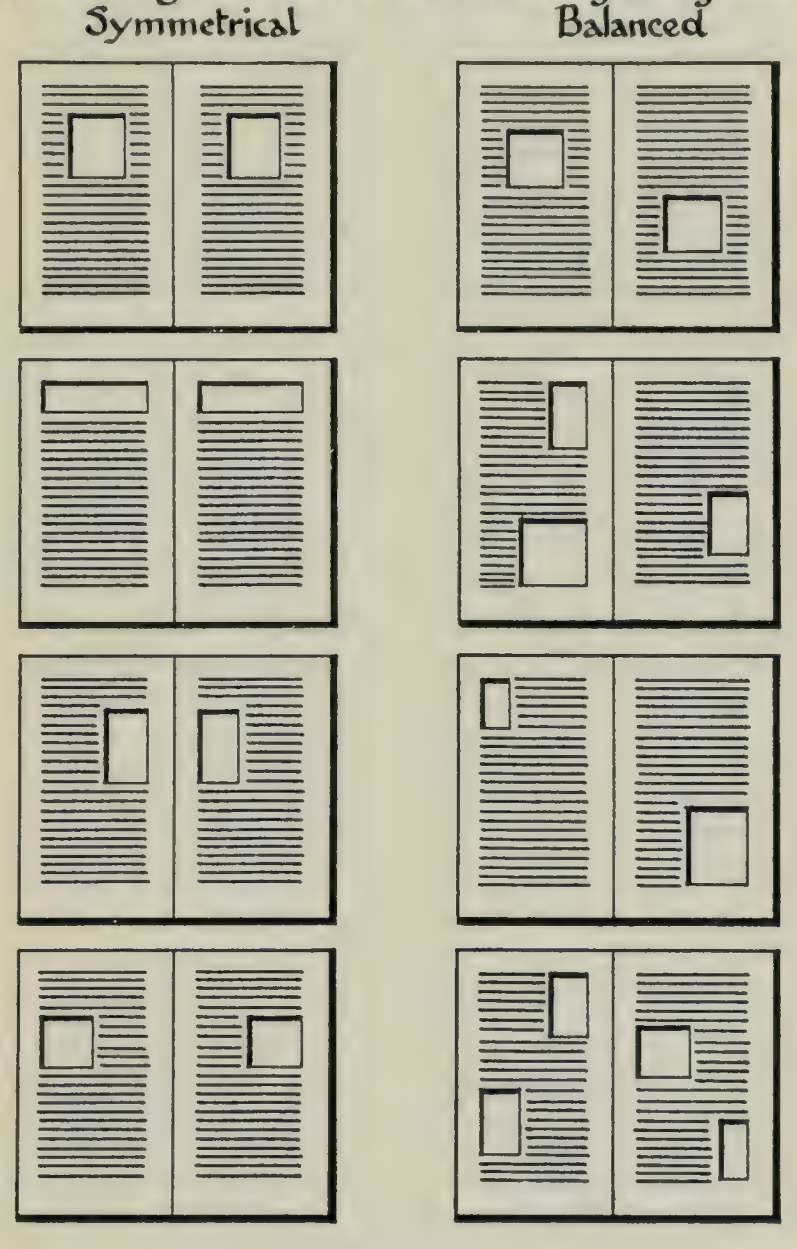
Diagrams E, F, and G show varied proportions which are obtained by certain geometrical methods. At E may be seen a common proportion adopted by printers; the diagonal of the oblong is equal to twice the width. At F the oblong is obtained by first drawing a square and then making the long side of the oblong equal to the diagonal: while at G the ratio of the two sides is obtained by a method, the working of which may be seen at

H. This has been termed the "Golden Ratio" and has been referred to in Book I.

While the designer should be perfectly familiar with the first rule relating to the proportions of the oblong which states that it should have a proportion of subtle dimensions which is difficult for the eye to detect, yet he should also become acquainted with trade conditions and practice because economy enters into the calculations of the workshop and certain page sizes are determined by the size of the large sheets of paper which are folded in such a manner as to permit of the largest number of small sheets to be cut from it. A good designer rarely grumbles at his restrictions but rather welcomes them as difficulties to be surmounted. A problem of spacing for the printer or maker of a booklet is seen on page 43, where it is necessary to introduce illustrative material on the page. Of the two treatments the balanced is by far the more difficult, but, of course, that is no reason why unsymmetrical arrangements should be shunned.


BOOK PAGES
A.
B.
C.
D
E.
F.
G
H.

Placing Pictures on Facing Pages.



WOOD-BLOCK PRINTING.

BLOCK printing was practised by the ancient Egyptians and by the Chinese and Japanese many centuries before the Christian era. European wood engravers received their inspiration from the artists of the East and men like Albert Durer carried the art to a high standard of perfection.

Wood engraving lends itself well to creative effort and its character makes it an appropriate type of decoration to accompany the pen work which has already been recommended. The design should be simple, with details similar to those of a silhouette. Make the drawing complete and exactly the same size as the required print; then finish it in ink to look exactly like the print when finished.

The wood may be any close-grained type, kauri-pine, cherry, boxwood, or American whitewood. The tools required are, a knife sharpened on one side only, as shown on the diagram, three or four gouges and a baren. Water-colour paints or powder colour, and a clamp for holding the block whilst cutting, are also necessary.

Having smoothed the surface of the wood with glass-paper, transfer the design from the paper to the wood. Outline the pattern by cutting with the knife which is held so that it slopes away from the design. Hold the knife firmly in the right hand and place the middle finger of the left at the back of the blade near the point. The first cut, at about 60° sloping away from the pattern, is then followed by another on the opposite slope which results in a V-shaped groove. When this groove has been cut round the whole design the ground can be cleared easily by means of gouges.

Capital letters appropriate to accompanying lettering made with round or square-pointed pen nibs, may be made easily in wood. Those letters designed for metal *repousse* will be found to be admirably suited in every way.

To obtain the very simplest impressions from wood-blocks a colour pad may be made with several thicknesses of cheese-cloth cut somewhat longer than the block and placed over blotting-paper. The pad may be saturated with oil colour thinned with turpentine, but water-colour or dye may be used satisfactorily. The block and pad may then be used in much the same way as a rubber stamp and pad. Several trials should be made before placing it on the finished material. When two colours are required it is necessary to apply them to the block by means of a brush.

This description gives the A.B.C. of the work, but experience will open up a vista which will demand much more intricate handling. The method of printing linoleum-blocks explained on page 57 may be used with wood-blocks. An additional and a still more professional way to print is by means of a clothes-wringer or a printing-press.

The Japanese method of printing consists of first brushing the colour over the block, the paper, previously dampened, is then placed upon it. Over that another sheet of smooth tough paper is laid, and the whole rubbed vigorously with a baren. The paper (drawing paper will do) must be dampened evenly a long time in advance and be left under pressure with damp blotting-paper above and below every two or three sheets.

The baren may be made from a piece of coarse-grained but smooth wood, with the edges rounded off, or a block covered with coarse canvas. A Japanese baren is made from a circular, flat piece of wood with dry palm-leaf stretched across the face and twisted into a handle at the back. The ribs of the leaf are enough to give the required grip on the paper backing to make sure the colour is rubbed into the paper.

The colour may be ordinary water-colour, but if it does not work by itself mix a little paste to keep it moist long enough, and to hold it together on the block. The consistency of colour, dampness of paper, etc., must all be learned from experience.

In printing by means of a clothes-wringer, a holder or carrier must be made for the block from three pieces of thick strawboard, the first for a bed upon which to rest the block, the second with a hole cut in it into which the block just fits, and the third for a cover. The middle one should be the thickness of the block and if a rubber roller-mangle is used, the strawboard should be the same width as the rollers.

The block prepared with colour should then be placed in the hollow and the dampened paper carefully placed on it, and two or three thicknesses of blotting or other soft paper laid over all. Then run the carrier block and paper through the wringer and back again.

The rudiments of block-printing are found in the stick printing, often cleverly done by little children in the elementary schools. On page 50 simple units may be seen and these can be altered to suit requirements by using a small triangular or round file. Complete stick printing equipments may be purchased from school material dealers, but the units may also be made from old penholders, pencils, and oddments generally. A still simpler method is to make blocks from potato or turnip:—take a piece of potato and cut a piece off it two or three inches long, making it square at both ends, dip one end into some paint and then make an impression on the paper. This will be found to work admirably with young children.

On pages 51 and 52 may be seen a capital cut from basswood ⅞″ thick. The background was cut down ¼″ with a knife; a gouge might have been used for this process. The lines of the design were kept sharp and true and the background was kept at an even depth.

A colour pad was made with several thicknesses of cheese-cloth cut somewhat longer than the block, and placed over blotting-paper. The pad was saturated with oil colour thinned with turpentine. Water-colour or dye may be used satisfactorily. The block and pad were then used in much the same way as a rubber stamp and pad. Several trials should be made before placing it on the finished material. When two colours are required it is necessary to apply them to the block by means of a brush.

The wood-block illustrations on page 53 were printed by students from a school at Bembridge, England.

This school is well-known for the Art and Craftwork which is produced by the students and the words of the Principal, Mr. I. Howard Whitehouse, in favour of such work may well be quoted here:—"I believe profoundly that manual activities, using these words in their widest sense to embrace art and craftsmanship, should not be regarded as trivial extras or as pastimes for young children, but should be given a place of honour in every school and should be recognized as definite instruments of noble education.

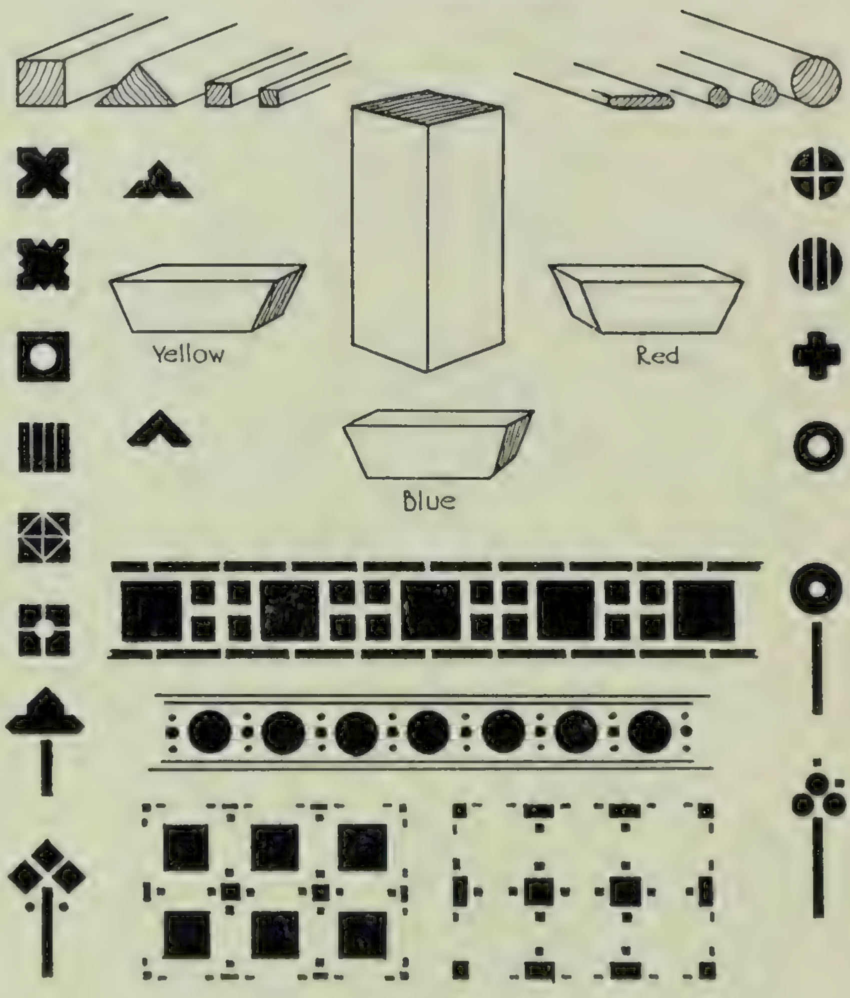
Such an ideal has been before us here, and so far as we have been enabled in any degree to realize it, this has been without loss to the ordinary academic work common to all public schools. We believe, indeed, that the latter has greatly benefited owing to the larger vision and the keener intellectual spirit introduced into the school by a wider curriculum giving to arts and crafts their proper place."

On pages 54, 55, and 56 will be seen some fine examples of woodcuts, a type of illustration which is being more and more appreciated.

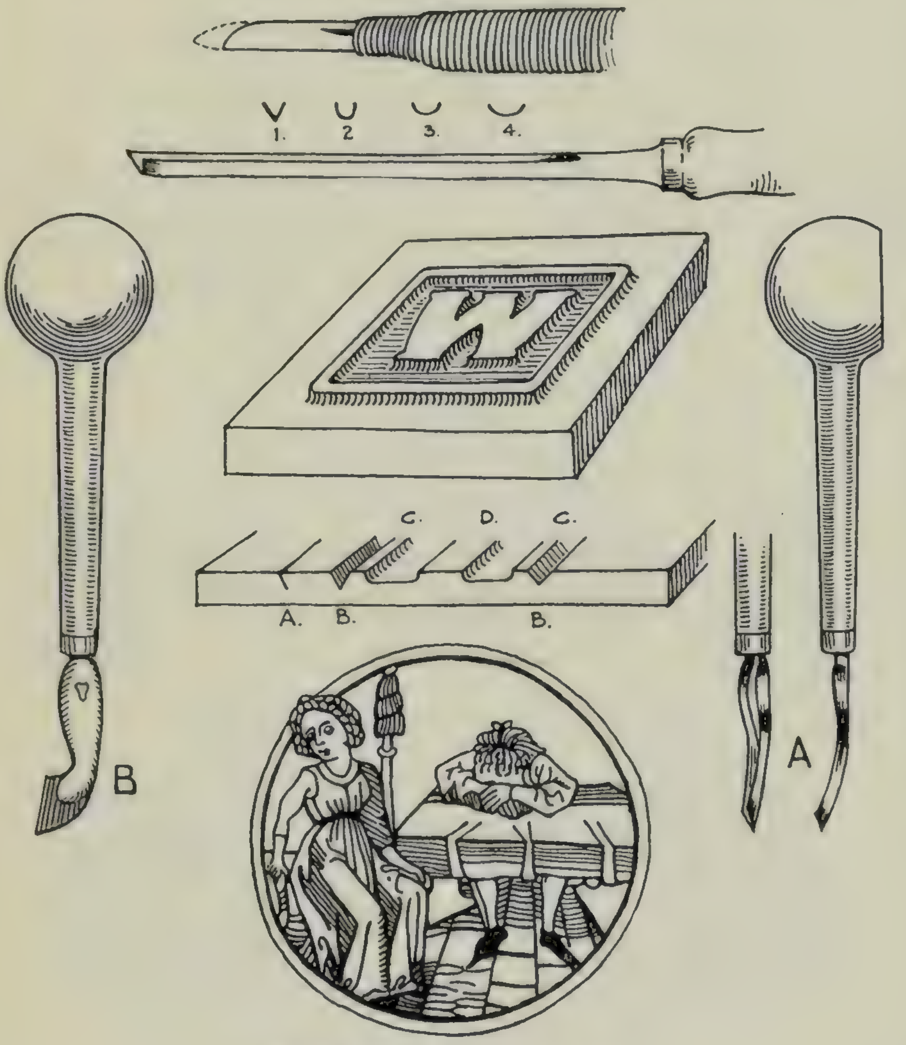
Excellent lino cutters are made by William Mitchell, Birmingham, England. Box containing five cutters—varied sizes—one dollar per box, (see B). Set of five, varied sizes (see A)—forty cents per box. Set of five, varied sizes and shapes (see C)—sixty-five cents per box.

WOOD-BLOCK MAKING AND PRINTING

STICK PRINTING



WOOD-BLOCK CUTTING AND PRINTING



WOOD BLOCK PRINT OF 1480

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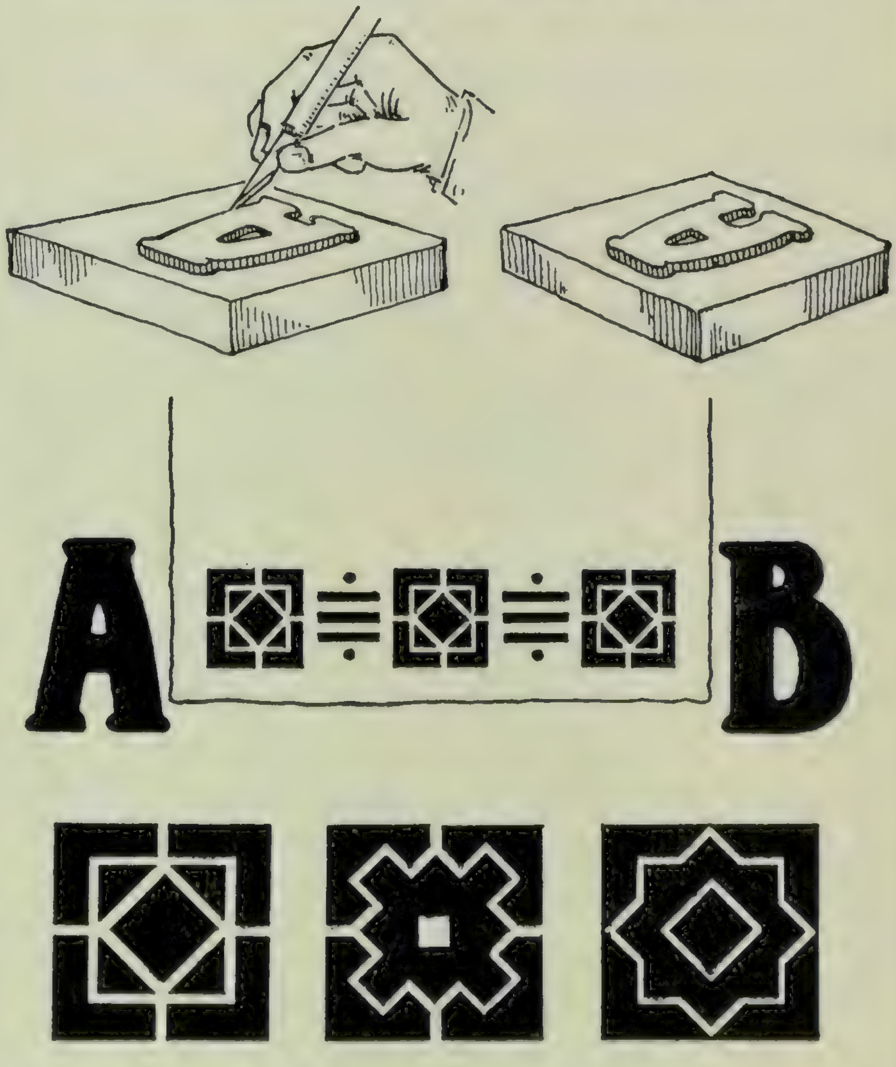
PROVINCIAL LIBRARY.
VICTORIA, B. C.

WOOD-BLOCK CUTTING AND PRINTING

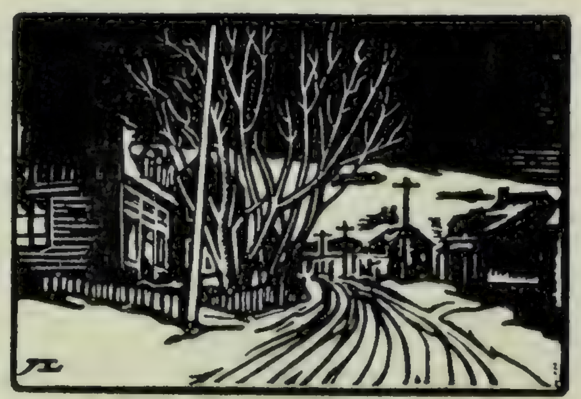


St. Francis

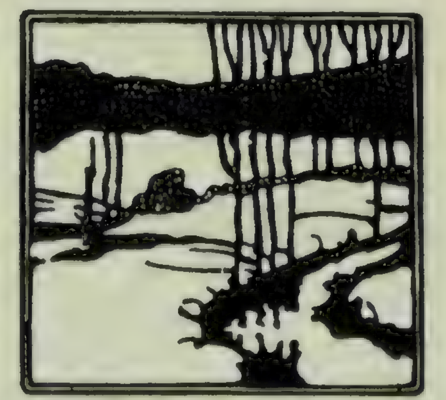
A Rough Sea

Floods

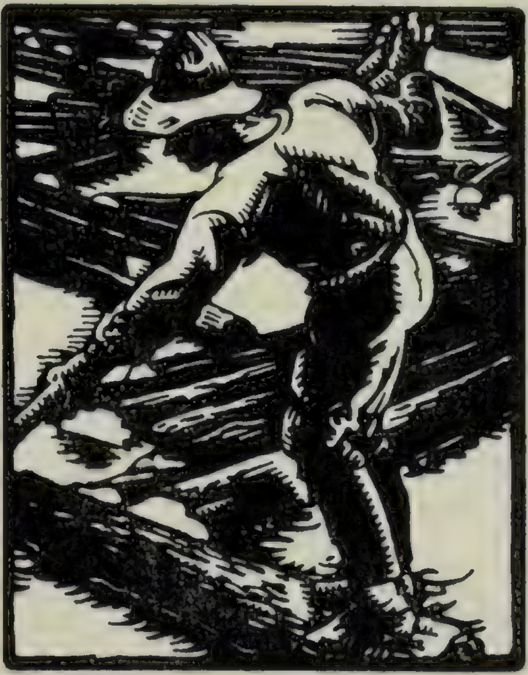
WOODBLOCK PRINTING



From "The Canadian Nation"

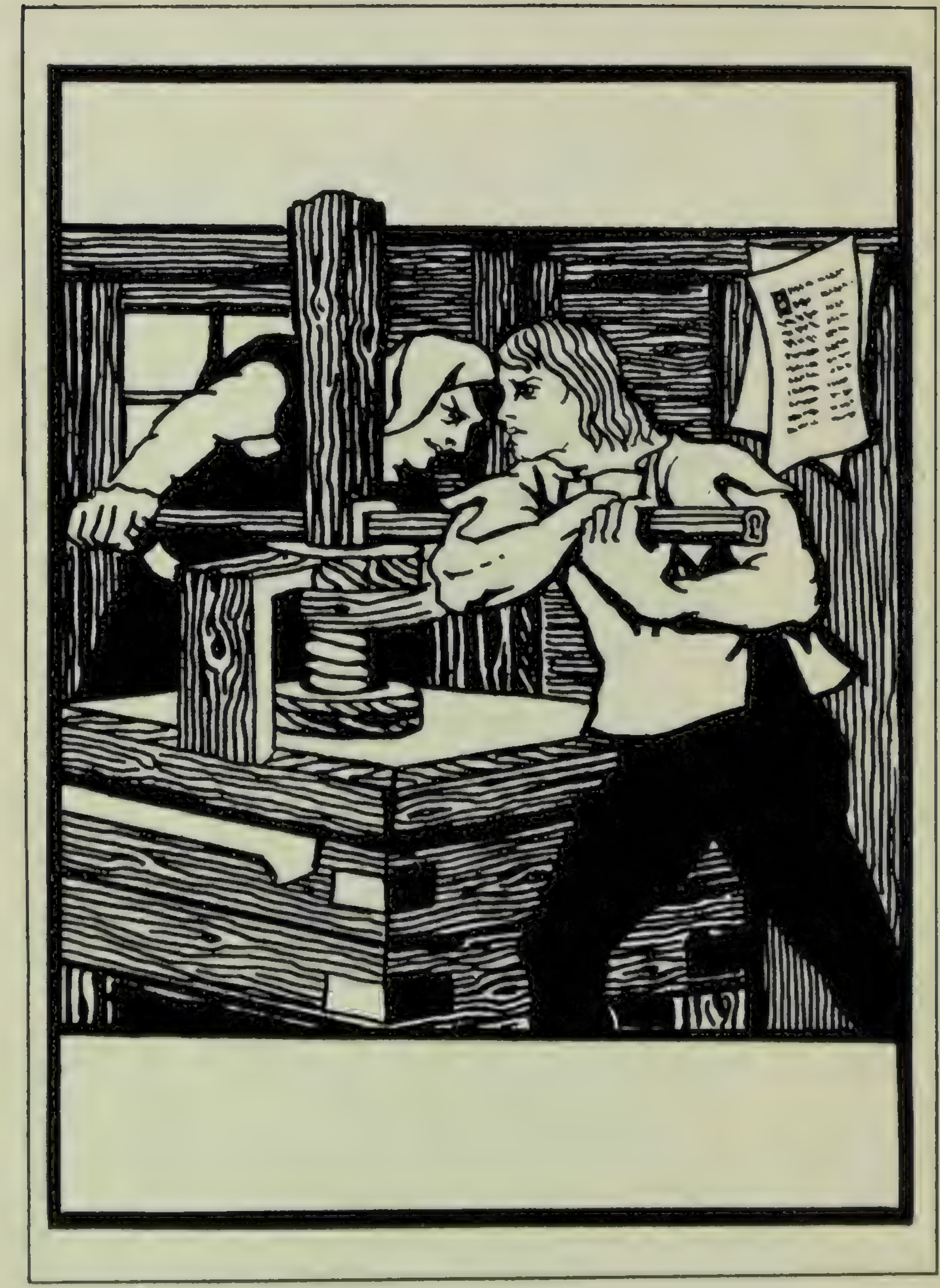


From "Art and Labor" by W.G.Raffe.



THE LOGGER

A Woodcut by Edwin Holgate
From "The Canadian Nation"



LINOLEUM-BLOCK PRINTING

LINOLEUM-BLOCK printing is a modern phase of wood-block printing. It is not capable of such fine work as wood but, being easy to cut, it is suitable for beginners. The equipment is simple and inexpensive and a broad treatment is almost a necessity. For this reason block-printing is an excellent craft, as it focuses attention on that which is fundamental to all good art, viz., breadth and simplicity. The best grade of battleship linoleum one-quarter-inch thick, should be used, and this need not be mounted if it has to be used in the carrier described under wood-block printing. When, however, it has to be reproduced in a printing press, the linoleum will require to be mounted on a wood-block type-high, or when completed $\frac{11}{12}$ of an inch. These blocks may be purchased ready made.

When the design is completed take a tracing and turn it face down on the linoleum, then trace the lines through to the material. The design is thus reversed which, like printers' type, is the correct position. The subsequent printing from the block to the paper brings the design to its original position. The face of the linoleum block is often painted with white show-card paint to bring the design out more clearly. Sometimes a mixture of glue and paste is used to stick the tracing paper to the block. When this is dry the background is cut away from the lines, after which the remaining paper is sponged off the block with warm water.

The first operation in cutting is to outline the design with the veining tool. Next, make a gouge cut completing a groove all round the design and rout out the open spaces with a larger gouge. After these operations are completed, cut the necessary fine lines within the design.

Those students who must be economical will find that an old umbrella rib will act as a substitute for a veining tool. File a piece off about two inches long and hammer one end so that it is shaped like the rounded end of a pen nib. This can be fitted into a pen holder and the other end may be sharpened so that it will cut the linoleum.

The abstract forms seen on page 50 may be changed into leaf, flower, or animal forms, and the end of a pencil would do admirably as a block.

Prints may be taken by hand or from a letter press. The block should be inked with a brayer and placed in the centre of the press. A sheet of the paper to be printed, previously dampened, should be laid carefully over the face of the block and then covered with a padding of soft papers.

Screw the press down until a firm impression and a satisfactory print is secured.

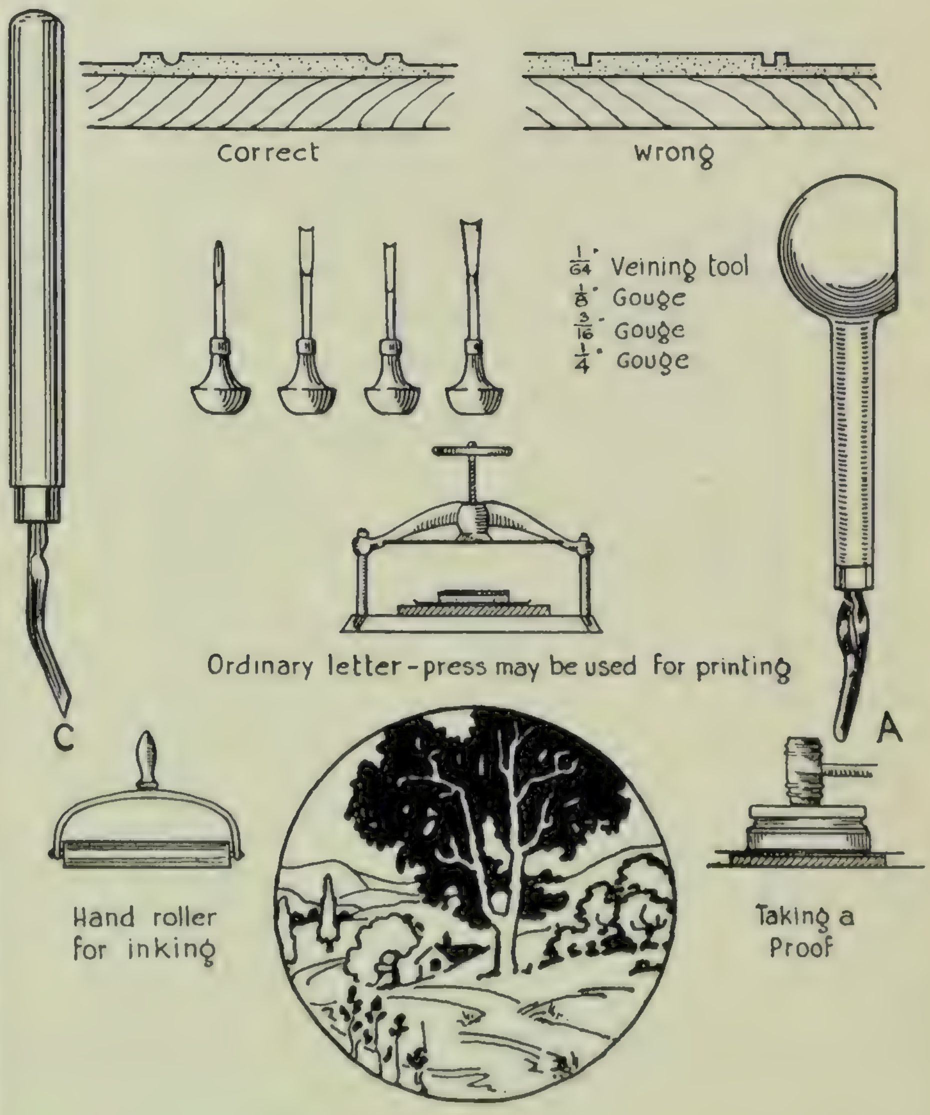
Illustrations A and C, page 60, show cutters sold by William Mitchell, Birmingham, England. For prices see page 49.

For further particulars read "Essentials of Linoleum Block Printing," by Ralph W. Polk, published by Manual Arts Press, Peoria, Ill.

Phillips—The Technique of the Color Woodcut—Brown Robertson Co.

F. Morley Fletcher—"Wood-Block-Printing" —Pitman—Toronto.

LINOLEUM BLOCK PRINTING



CONSTRUCTION OF THE BOOKLET.

IT is advisable to master some method of making simple booklets wherein an opportunity may be given to exercise and gain skill in lettering, to arrange the lettering suitably on the page, to design initial letters, line fillings, head-pieces, tail-pieces and endings. These all demand the best creative skill that a student can give.

It is also possible to make appropriate use of block-printing and to produce booklets having all the charm which is associated with hand-work in contrast to those characterized by machine accuracy.

Booklet making usually starts with one signature folded within a cover and sewn in some simple way as seen on page 63. Two ways of sewing the booklet will be seen there and both ways can be mastered easily by reference to the diagrams.

In Method A the needle is inserted at A and then at B, C, A, in succession. The ends are then tied firmly. The tie may be made either inside or outside of the booklet as desired.

In method B the needle is inserted first at B, then at A, B, C, D, C, in succession; the ends are then tied firmly either outside or inside as preferred.

On page 64 one sees how two or more signatures may be sewn together. Further than this there is no need to go at present, but those students who wish to do so may consult the following book:—

McMurray, Eggers & McMurray—"Teaching Industrial Arts"—Macmillan Co. of Canada, Ltd., Toronto.

Book-making and book-binding are worthy activities for school students; the equipment is simple and moderate in price, and the scope for creative skill is wonderful. A book that will be helpful is "Book-binding for Beginners," by J. Kay, published by Cassell & Co., Toronto.

For information on paper read the following:—

J. W. Shipley—"Pulp and Paper-making in Canada"—Longmans, Green & Co., Toronto.

APPLIED LETTERING

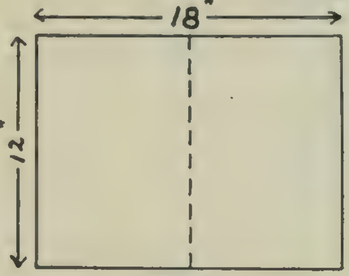


Fig. 1

Fold cover paper and design cover with title and author's name.

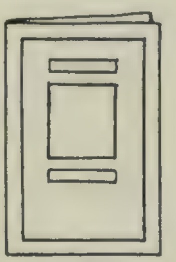


Fig. 2

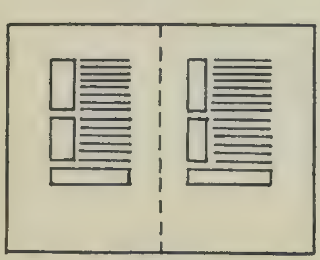


Fig. 3.

Fold white paper for inside pages. Letter poem, Decorate capitals, and use border at bottom.

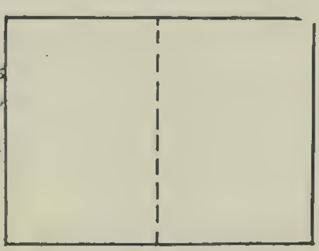


Fig. 4

Place together mark for sewing. Sew with inside facing upwards.

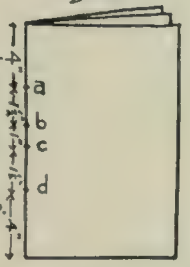


Fig. 5.

1. Sew up through b, leaving end
2. Sew down through a.
3. Up through b.
4. Down through c.
5. Up through d.
6. Down through c, tie ends

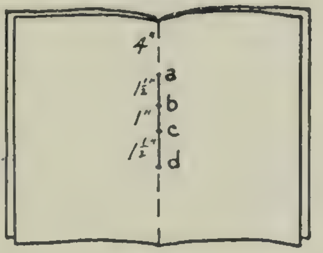
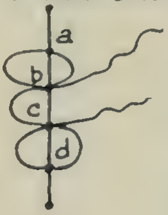


Fig. 6

Place pages in cover and paste two end leaves to cover



B.

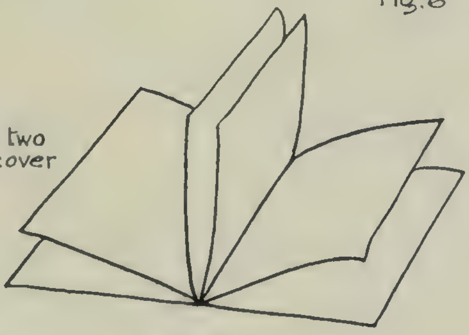
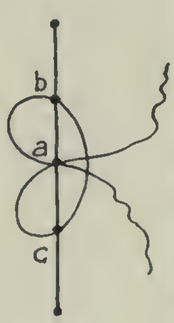
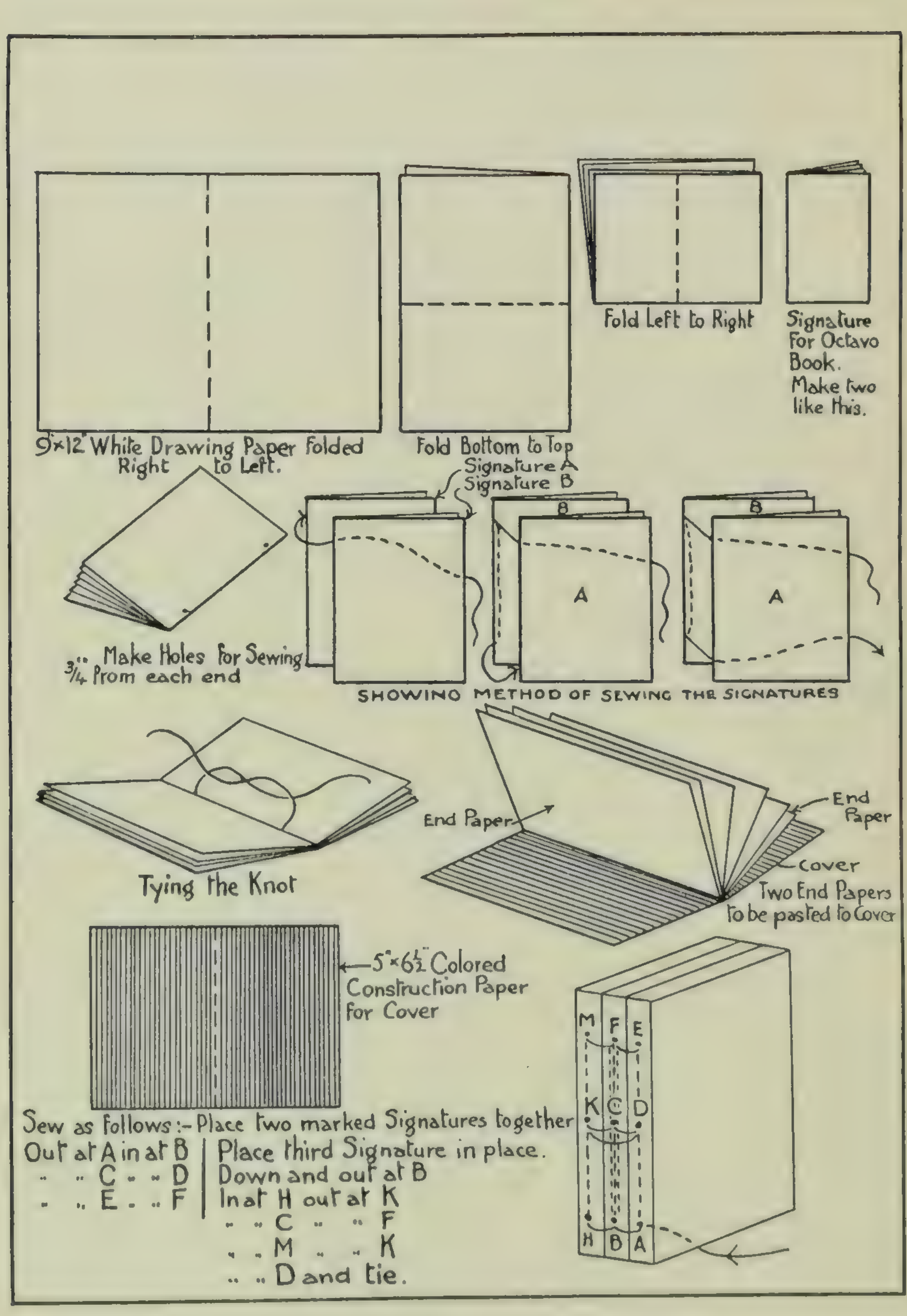


Fig. 7.



A.


9"×12" White Drawing Paper Folded Right to Left.
Fold Bottom to Top
Fold Left to Right
Signature For Octavo Book. Make two like this.
Signature A
Signature B
B
A
B
A
Make Holes for Sewing 3/4" from each end
SHOWING METHOD OF SEWING THE SIGNATURES
Tying the Knot
End Paper
End Paper
Cover
Two End Papers to be pasted to Cover
5"×6½" Colored Construction Paper for Cover
M
F
E
K
C
D
H
B
A

Sew as follows:- Place two marked Signatures together

Out at A in at B
" " C " " D
" " E " " F

Place third Signature in place.
Down and out at B
In at H out at K
" " C " " F
" " M " " K
" " D and tie.

EARLY BOOKS

THE earliest writing of which we have any record was of a cuneiform kind made on clay slabs and written with a spatula. The slabs which are to be seen in the British Museum are oblong, cylindrical, hexagonal, and octagonal in form. While the Babylonians were writing on clay tablets the Egyptians were writing on papyrus, a reed which grew by the river Nile. The stems of the papyrus when fully grown, were taken from the water, cut into strips and laid side by side. Other strips coated with gum were laid across them and then these were dried under heavy pressure.

Rolls of this material in the British Museum vary in length, but one roll measures one hundred and thirty-five feet long and one foot five inches wide. The reed pen with which the writing was done usually measures about ten inches long and the wooden palette with recesses to hold ink varies from eight inches to sixteen inches long.

Inks were made of various colours from minerals, coloured stones, vegetable juices, all mixed with gum.

These papyrus rolls containing the written records of the time were carefully preserved in libraries much as books are kept at the present time. Many centuries before Christ, there existed libraries containing great numbers of these scrolls. One famous king is estimated to have possessed 200,000 rolls.

Following the papyrus scroll came skins and parchment upon which was done much excellent writing.

On page 69 at A there is to be seeen a short scroll with continuous writing. There were no spaces, no stops and no capital letters on the very old examples.

At B it will be observed that the scroll takes an elongated form with writing still continuous, while at C the writing is broken by spaces. This series shows the evolution of the book, for it was then possible to fold the papyrus instead of rolling it, and from that a natural step was taken when the pages were sewn at one edge as at E. By this time capital letters were used and the writing was broken by stops to assist the reader.

It may well be imagined how long it took to write some of these books and how precious they would be. Besides some books were exceedingly beautiful; the lettering, written as it was with a soft quill, was artistic and full of human feeling.

The men who wrote such books in the middle ages were nearly always monks and they were called scribes. The place where the monks wrote was called the scriptorium and one of the chief books to come from their hands was the Scriptures. Script letters were written separately and naturally had no joining strokes. The quill pen was used for both lettering and ornamentations and thus a delightful harmony resulted. The appropriateness of type, illustration and ornamentation had a completeness which is seldom seen in modern printed books.

The printing of books from wood-block letters began in the 14th century. At first the capital letters and pictures were put in by hand but later on, capitals, pictures, and type were all cut from wood.

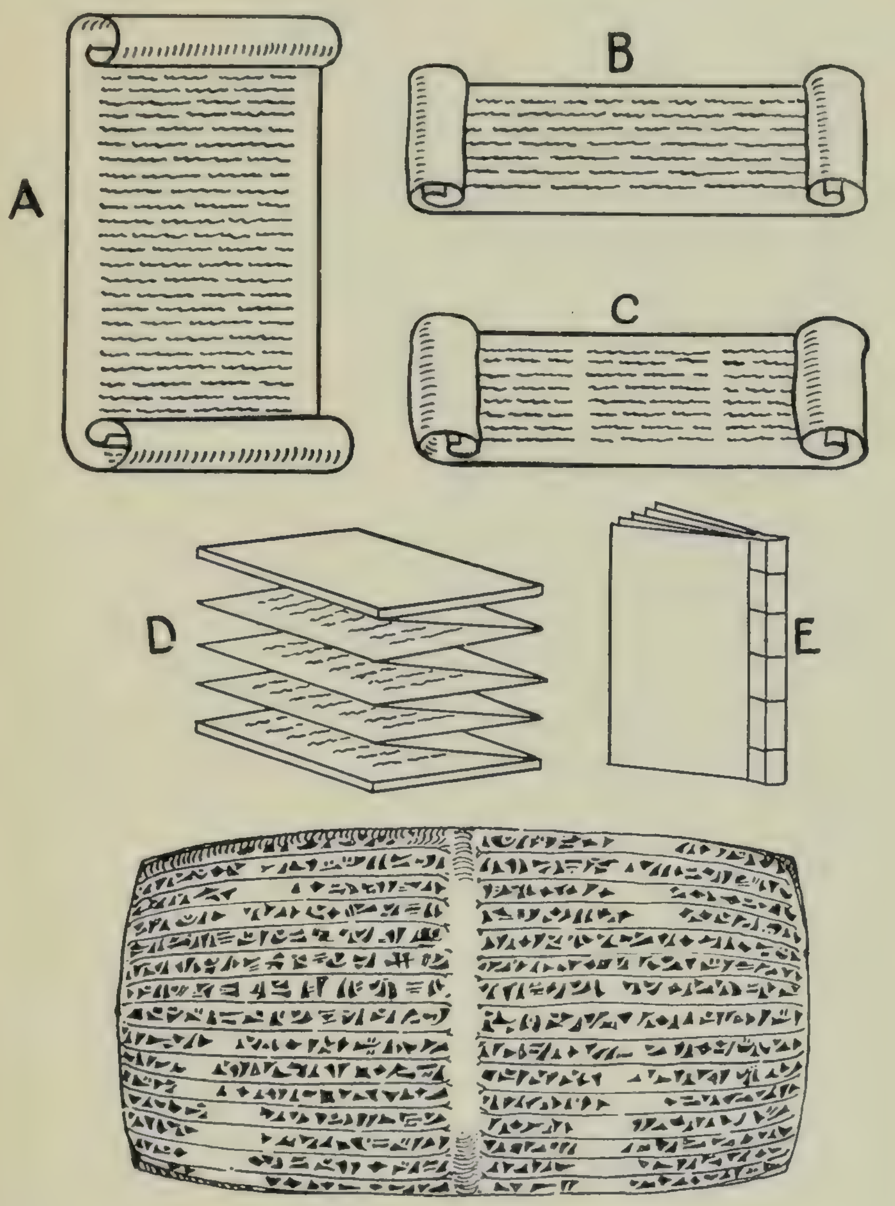
In 1477 the first printed book was produced in England by William Caxton.

On page 29 a charming sheet of spontaneous pen work is seen in conjunction with capitals cut from wood-blocks. This sheet is taken from "The Basis of Design" by Walter Crane. There is nothing laboured or mechanical on the page; the arrangement is excellent, and the harmony between the lettering and decorations is perfect. Students may well be encouraged to emulate this master of line.

The quotation on page 29 is by a pupil who has mastered the sequence of strokes in this particular alphabet. This is an excellent type of school work and much valuable assistance may be gained from the work already referred to on page 32, "Basic Lettering" by Grace E. Melvin.

On page 30 may be seen some examples of pen decoration from the work of that great master craftsman, William Morris. These designs were cut in wood and those who have seen the pages from the hand of this great penman know how rich in effect they were.

EVOLUTION OF THE BOOK



GENEALOGY OF LETTERS.

THE alphabet of the English language as we know it to-day, is descended from that used by the Romans two thousand years ago. This in turn was evolved by the Phoenicians and Grecians, from that used by the Egyptians more than eight thousand years ago.

The stages of development from these dim and distant ages may be divided into the following:—

(*a*) The mnemonic or memory-aiding.

(*b*) The pictorial in which a picture of the thing is given.

(*c*) The ideographic in which the picture is converted into a symbol.

(*d*) The phonetic in which the symbol represents a sound.

The mnemonic, or memory-aiding stage is represented by the knotted cords and by wampums or shell-ornamented belts used by primitive peoples. Herodotus tells us that when Darius bade the Ionians remain to guard the floating bridge which spanned the Ister, he tied sixty knots in a thong, saying "Men of Ionia . . . . do ye keep this thong and do as I shall say, . . . so soon as ye shall have seen me go forward against the Scythians, from that time begin and untie a knot on each day; and if within this time I am not here and ye find that the days marked by the knots have passed by, then sail away to your own lands."

The pictoral stage was an endeavour to identify personal as well as tribal property. Examples are to be found from early peoples all over the world and it is owing to this picture-writing that we know so much about the early history of mankind.

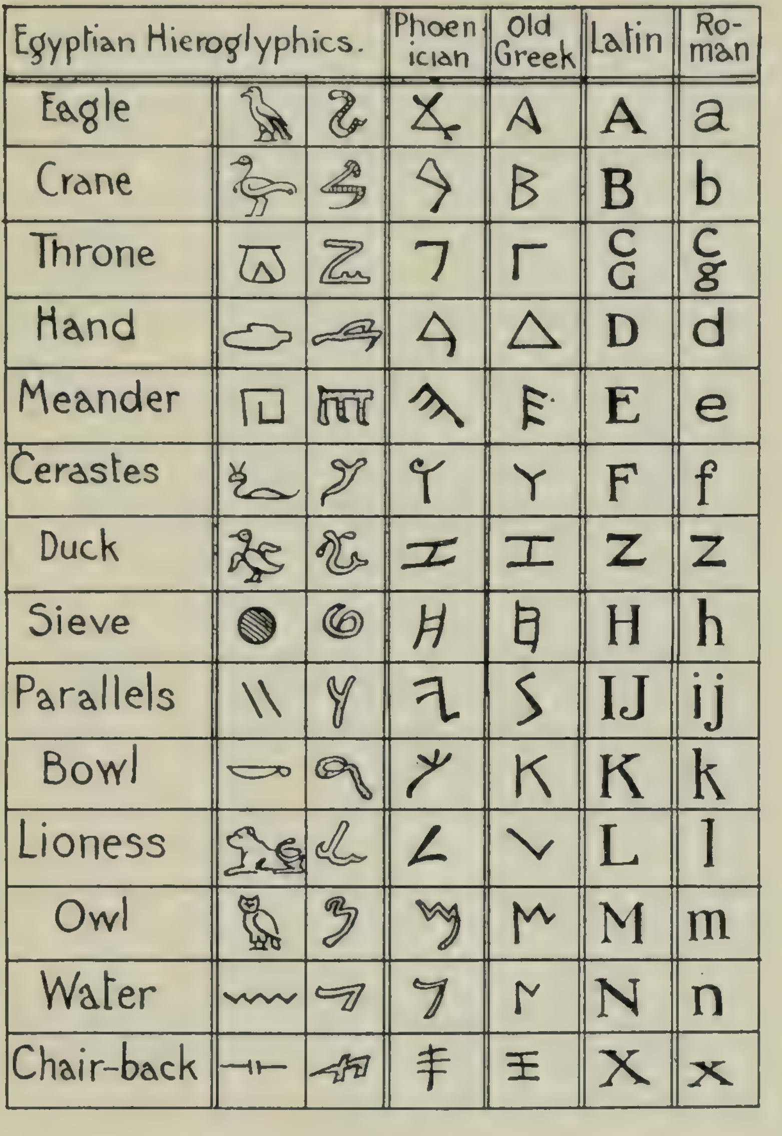
The phonetic stage was a simplification of all the others and could be classed as the shorthand of that early period.

As a matter of fact it was devised by that great trading people, the Phoenicians, who found the pictorial and ideographic forms too cumbersome for their business. The letter forms had a cuneiform character; that is, they were wedge-shaped (Latin:—Cuneus—a wedge) owing to the letters being first made with a spatula on clay tablets. In the Scriptures we read:—"And Moses' anger waxed hot and he cast the tables out of his hand and brake them;" and again:—"And the Lord said unto Moses, 'Hew thee two tables of stone like unto the first and I will write upon these tables the words that were in the first tables which thou brakest'."

The word alphabet is obviously derived from the names of two letters: Alpha and Beta, which stand at the head of the Greek alphabet.

For centuries no one suspected that the wedge-shaped characters covering bricks and tablets had any serious meaning. In 1621 Pietrodella Valle, a Spanish traveller, visited the famous ruins of Persepolis, and he observed that the arrow-headed inscriptions might give the history of the place. It was not, however, until the inscriptions on the Behistun Rock in Persia were deciphered by Lieutenant Henry Rawlinson of the British Army that a reliable key to the ancient inscriptions was found. We are familiar with Egyptian hieroglyphic writing and it is interesting because in that type of writing is seen the transition from pictograms to ideograms and then to phonograms.

GENEALOGY OF THE ENGLISH ALPHABET



Egyptian Hieroglyphics.			Phoenician	Old Greek	Latin	Roman
Eagle					A	a
Crane					B	b
Throne					C G	c g
Hand					D	d
Meander					E	e
Cerastes					F	f
Duck					Z	z
Sieve					H	h
Parallels					IJ	ij
Bowl					K	k
Lioness					L	l
Owl					M	m
Water					N	n
Chair-back					X	x